

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name:	Essex Estuaries
Unitary Authority/County:	Essex
SAC status:	Designated on 1 April 2005
Grid reference:	TM103048
SAC EU code:	UK0012720
Area (ha):	46140.82
Component SSSI:	Blackwater Estuary SSSI, Colne Estuary SSSI, Crouch and Roach Estuaries SSSI, Dengie SSSI, Foulness SSSI

Site description:

This is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. The site comprises the major estuaries of the Colne, Blackwater, Crouch and Roach rivers. Essex Estuaries contains a very wide range of characteristic marine and estuarine sediment communities and some diverse and unusual marine communities in the lower reaches, including rich sponge communities on mixed, tide-swept substrates. Subtidal areas have a very rich invertebrate fauna, including the reef-building worm *Sabellaria spinulosa*, the brittlestar *Ophiothrix fragilis*, crustaceans and ascidians.

There are extensive intertidal mudflats and sandflats in estuaries and at Dengie Flats and Maplin Sands. The area includes a wide range of sediment flat communities, from estuarine muds, sands and muddy sands to fully saline, sandy mudflats with extensive growths of eelgrass *Zostera* spp. on the open coast. Glasswort *Salicornia* spp. saltmarsh forms an integral part of the transition from the extensive and varied intertidal mud and sandflats through to upper salt meadows. The area of pioneer marsh includes gradation into extensive cord-grass *Spartina* spp. swards, including the most extensive remaining stand of the native small cord-grass *Spartina maritima* in the UK and possibly in Europe at Foulness Point. Other smaller stands are found elsewhere in the estuary complex, notably in the Colne estuary, where it forms a major component of the upper marsh areas.

Extensive upper saltmarshes remain, including Atlantic salt meadows with floristic features typical of this part of the UK. Golden samphire *Inula crithmoides* is a characteristic species of these marshes, occurring both on the lower marsh and on the drift-line. Mediterranean saltmarsh scrub occurs principally as a strandline community or at the foot of sea-walls. The local variant of this vegetation, which features sea-lavenders *Limonium* spp. and sea-heath *Frankenia laevis*, occurs at one location, Colne Point.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Estuaries
- Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*). (Mediterranean saltmarsh scrub)
- Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)
- *Salicornia* and other annuals colonising mud and sand. (Glasswort and other annuals colonising mud and sand)
- Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks)
- *Spartina* swards (*Spartinion maritimae*). (Cord-grass swards)

This citation relates to a site entered in the Register of European Sites for Great Britain.

Register reference number: UK0012720

Date of registration: 14 June 2005

Signed: *Trevor Salmon*

On behalf of the Secretary of State for Environment,
Food and Rural Affairs

European Site Conservation Objectives for Essex Estuaries Special Area of Conservation

Site Code: UK0013690



With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats**
- **The structure and function (including typical species) of qualifying natural habitats, and**
- **The supporting processes on which qualifying natural habitats rely**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

H1110. Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks

H1130. Estuaries

H1140. Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats

H1310. *Salicornia* and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand

H1320. *Spartina* swards (*Spartinion maritimae*); Cord-grass swards

H1330. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

H1420. Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*); Mediterranean saltmarsh scrub

This is a European Marine Site

This site is a part of the Essex Estuaries European Marine Site. These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 as amended from time to time (the "Habitats Regulations"). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment', including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where available) will also provide a framework to inform the measures needed to conserve or restore the European Site and the prevention of deterioration or significant disturbance of its qualifying features.

These Conservation Objectives are set for each habitat or species of a [Special Area of Conservation \(SAC\)](#). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving Favourable Conservation Status for that species or habitat type at a UK level. The term 'favourable conservation status' is defined in regulation 3 of the Habitats Regulations.

Publication date: 27 November 2018 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

Site Improvement Plan

Essex Estuaries

Site Improvement Plans (SIPs) have been developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). Natura 2000 sites is the combined term for sites designated as Special Areas of Conservation (SAC) and Special Protected Areas (SPA). This work has been financially supported by LIFE, a financial instrument of the European Community.

The plan provides a high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features. It does not cover issues where remedial actions are already in place or ongoing management activities which are required for maintenance.

The SIP consists of three parts: a Summary table, which sets out the priority Issues and Measures; a detailed Actions table, which sets out who needs to do what, when and how much it is estimated to cost; and a set of tables containing contextual information and links.

Once this current programme ends, it is anticipated that Natural England and others, working with landowners and managers, will all play a role in delivering the priority measures to improve the condition of the features on these sites.

The SIPs are based on Natural England's current evidence and knowledge. The SIPs are not legal documents, they are live documents that will be updated to reflect changes in our evidence/knowledge and as actions get underway. The information in the SIPs will be used to update England's contribution to the UK's Prioritised Action Framework (PAF).

The SIPs are not formal consultation documents, but if you have any comments about the SIP or would like more information please email us at IPENSLIFEProject@naturalengland.org.uk, or contact Natural England's Responsible Officer for the site via our enquiry service 0300 060 3900, or enquiries@naturalengland.org.uk

This Site Improvement Plan covers the following Natura 2000 site(s)

- UK9009245 Blackwater Estuary (Mid-Essex Coast Phase 4) SPA**
- UK9009243 Colne Estuary (Mid-Essex Coast Phase 2) SPA**
- UK9009244 Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA**
- UK9009242 Dengie (Mid-Essex Coast Phase 1) SPA**
- UK0013690 Essex Estuaries SAC**

Site description

The Essex Estuaries SIP covers the Essex Estuaries SAC and five mid-Essex coast SPAs (Blackwater Estuary, Colne Estuary, Crouch and Roach Estuaries, Dengie and Foulness).

The area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats.

Four different saltmarsh features of European importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species.

Plan Summary

This table shows the prioritised issues for the site(s), the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Coastal squeeze	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A059(B) Common pochard, A082(NB) Hen harrier, A130(NB) Eurasian oystercatcher, A132(B) Avocet, A132(NB) Avocet, A137(B) Ringed plover, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A151(NB) Ruff, A156(NB) Black-tailed godwit, A157(NB) Bar-tailed godwit, A162(NB) Common redshank, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, H1110 Subtidal sandbanks, H1130 Estuaries, H1140 Intertidal mudflats and sandflats, H1310 Glasswort and other annuals colonising mud and sand, H1320 Cord-grass swards, H1330 Atlantic salt meadows, H1420 Mediterranean saltmarsh scrub, Waterbird assemblage	Investigate impacts on the site to inform development of remedial actions	Colchester Borough Council, Environment Agency, Essex County Council, Maldon District Council, Ministry of Defence (MoD), Natural England, Ports And Harbour Authority(ies), Rochford District Council, Southend-on-Sea Borough Council, Tendring District Council, University(ies), Marine Management Organisation (MMO), Industry, Local yacht club/ Marina

2 Public Access/Disturbance	Pressure	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A059(B) Common pochard, A082(NB) Hen harrier, A130(NB) Eurasian oystercatcher, A132(B) Avocet, A132(NB) Avocet, A137(B) Ringed plover, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A151(NB) Ruff, A156(NB) Black-tailed godwit, A157(NB) Bar-tailed godwit, A162(NB) Common redshank, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, Waterbird assemblage	Analyse disturbance effects and manage public access to minimise disturbance	Colchester Borough Council, Environment Agency, Essex County Council, Essex Wildlife Trust, Maldon District Council, Natural England, Ports And Harbour Authority(ies), Rochford District Council, RSPB, Southend-on-Sea Borough Council, Tendring District Council, Marine Management Organisation (MMO)
3 Fisheries: Commercial marine and estuarine	Pressure/Threat	H1110 Subtidal sandbanks, H1130 Estuaries, H1140 Intertidal mudflats and sandflats	Where the assessments indicate management is required, introduce appropriate measures	Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Natural England
4 Planning Permission: general	Pressure	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A082(NB) Hen harrier, A130(NB) Eurasian oystercatcher, A132(NB) Avocet, A137(B) Ringed plover, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A151(NB) Ruff, A156(NB) Black-tailed godwit, A157(NB) Bar-tailed godwit, A162(NB) Common redshank, A195(B) Little tern, H1130 Estuaries, H1140 Intertidal mudflats and sandflats	Collate and analyse data to develop guidance for the site	Colchester Borough Council, Environment Agency, Essex County Council, Maldon District Council, Natural England, Rochford District Council, Southend-on-Sea Borough Council, Tendring District Council
5 Changes in species distributions	Threat	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A059(B) Common pochard, A082(NB) Hen harrier, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A151(NB) Ruff, A157(NB) Bar-tailed godwit, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, Waterbird assemblage	Investigate site level and larger scale factors affecting the declining SPA species	Natural England, RSPB, British Trust for Ornithology (BTO)

6 Invasive species	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A059(B) Common pochard, A082(NB) Hen harrier, A130(NB) Eurasian oystercatcher, A132(B) Avocet, A132(NB) Avocet, A137(B) Ringed plover, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A151(NB) Ruff, A156(NB) Black-tailed godwit, A157(NB) Bar-tailed godwit, A162(NB) Common redshank, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, H1110 Subtidal sandbanks, H1130 Estuaries, H1140 Intertidal mudflats and sandflats, H1310 Glasswort and other annuals colonising mud and sand, H1320 Cord-grass swards, H1330 Atlantic salt meadows, H1420 Mediterranean saltmarsh scrub, Waterbird assemblage	Investigate impacts of Pacific oyster and other non-native marine species and identify possible management	Essex County Council, Essex Wildlife Trust, Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Natural England, Ports And Harbour Authority(ies), RSPB, Shellfish Association of Great Britain (SAGB)
7 Fisheries: Recreational marine and estuarine	Pressure	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A059(B) Common pochard, A082(NB) Hen harrier, A130(NB) Eurasian oystercatcher, A132(B) Avocet, A132(NB) Avocet, A137(B) Ringed plover, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A151(NB) Ruff, A156(NB) Black-tailed godwit, A157(NB) Bar-tailed godwit, A162(NB) Common redshank, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, H1140 Intertidal mudflats and sandflats, Waterbird assemblage	Investigate the extent of impact of bait digging on the site	Essex County Council, Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Local Authority(ies), Natural England
8 Fisheries: Commercial marine and estuarine	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, H1130 Estuaries, H1140 Intertidal mudflats and sandflats	Introduce new byelaw for bottom towed gear, and ensure compliance	Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Natural England

9 Fisheries: Commercial marine and estuarine	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A059(B) Common pochard, A082(NB) Hen harrier, A130(NB) Eurasian oystercatcher, A132(B) Avocet, A132(NB) Avocet, A137(B) Ringed plover, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A151(NB) Ruff, A156(NB) Black-tailed godwit, A157(NB) Bar-tailed godwit, A162(NB) Common redshank, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, H1110 Subtidal sandbanks, H1130 Estuaries, H1140 Intertidal mudflats and sandflats, H1310 Glasswort and other annuals colonising mud and sand, H1320 Cord-grass swards, H1330 Atlantic salt meadows, H1420 Mediterranean saltmarsh scrub, Waterbird assemblage	Investigate and assess potential pressures from private and several fisheries, and identify possible management	Crown Estate (Marine), Essex Wildlife Trust, Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Local Authority(ies), Natural England, Landowner/occupier
10 Invasive species	Pressure	A046a(NB) Dark-bellied Brent goose, A048(NB) Common shelduck, A059(B) Common pochard, A082(NB) Hen harrier, A130(NB) Eurasian oystercatcher, A132(B) Avocet, A132(NB) Avocet, A137(B) Ringed plover, A137(NB) Ringed plover, A140(NB) Golden plover, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A151(NB) Ruff, A156(NB) Black-tailed godwit, A157(NB) Bar-tailed godwit, A162(NB) Common redshank, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, H1320 Cord-grass swards, Waterbird assemblage	Monitor <i>Spartina anglica</i> and assess effects on interest features.	Environment Agency, Natural England
11 Air Pollution: risk of atmospheric nitrogen deposition	Pressure	A046a(NB) Dark-bellied Brent goose, A191(B) Sandwich tern, A193(B) Common tern, A195(B) Little tern, H1130 Estuaries, H1310 Glasswort and other annuals colonising mud and sand, H1320 Cord-grass swards, H1330 Atlantic salt meadows, H1420 Mediterranean saltmarsh scrub	Investigate potential atmospheric nitrogen impacts	Not yet determined

Issues and Actions

This table outlines the prioritised issues that are currently impacting or threatening the condition of the features, and the outstanding actions required to address them. It also shows, where possible, the estimated cost of the action and the delivery bodies whose involvement will be required to implement the action. Lead delivery bodies will be responsible for coordinating the implementation of the action, but not necessarily funding it. Delivery partners will need to support the lead delivery body in implementing the action. In the process of developing the SIPs Natural England has approached the delivery bodies to seek agreement on the actions and their roles in delivering them, although in some cases these discussions have not yet been concluded. Other interested parties, including landowners and managers, will be involved as the detailed actions are agreed and delivered. Funding options are indicated as potential (but not necessarily agreed or secured) sources to fund the actions.

1 Coastal squeeze

Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. 'Managed realignment' schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the SIP area are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Investigate current and future impacts of coastal squeeze on the site and its interest features in order to prioritise and design remedial actions. The investigation should include analyses of estuary form to identify locations where managed realignment or other interventions would move each estuary towards equilibrium (in terms of sediment movement) and so provide long-lasting benefits for its interest features. Knock-on effects of managed realignment or other schemes on interest features and supporting habitats outside the current intertidal zone need to be factored in. The investigation should also include a detailed comparison of published studies of saltmarsh loss for the estuaries concerned, to assess the extent to which differences between these studies' results reflect real changes in rates of saltmarsh loss, rather than methodological differences.	£60,000	2015-18	Investigation / Research / Monitoring	Not yet determined	Environment Agency	Colchester Borough Council, Essex County Council, Maldon District Council, Ministry of Defence (MoD), Natural England, Ports And Harbour Authority(ies), Rochford District Council, Southend-on-Sea Borough Council, Tendring District Council, University(ies), Marine Management Organisation (MMO), Industry, Local yacht club/ Marina

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1B	Using the results of the investigation above and other studies, review the existing Regional Habitat Creation Programme. Where necessary design new remedial actions such as: managed realignment; beneficial recharge, and other interventions which address the direct and indirect negative effects of sea level rise and coastal squeeze on the N2K interest features of the Essex estuaries (including effects on terrestrial and freshwater habitats supporting SPA species currently protected behind seawalls). Consider available partnership arrangements and funding sources, secure funding and approvals, and implement.	Not yet determined	2015-20	Shoreline Management Plan and Strategies	Not yet determined	Environment Agency	Essex County Council, Local Authority(ies), Ministry of Defence (MoD), Natural England, Southend-on-Sea Borough Council, Marine Management Organisation (MMO)

2 Public Access/Disturbance

Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
2A	Collate and analyse the available data on the spatial and temporal distributions within and around the SIP area of (i) SPA bird species; (ii) key habitats and resources that support them, and (iii) potential sources of disturbance. Combine these with information in the literature on species' sensitivities to disturbance to: (a) identify combinations of location, time of year, species and type of disturbance where additional disturbance is likely to produce adverse effects; and (b) identify important knowledge gaps that need to be addressed. Summarise and disseminate the results to delivery partners and others involved in site management in user-friendly formats, such as sensitivity maps and matrices.	£30,000	2015-18	Investigation / Research / Monitoring	Not yet determined	Natural England	Colchester Borough Council, Environment Agency, Essex County Council, Maldon District Council, Ports And Harbour Authority(ies), Rochford District Council, Southend-on-Sea Borough Council, Tendring District Council, Other

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
2B	Investigate mechanisms to manage public access and minimise disturbance to breeding and overwintering birds, focusing on the most sensitive areas.	£30,000	2017-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Colchester Borough Council, Essex County Council, Essex Wildlife Trust, Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Maldon District Council, Rochford District Council, RSPB, Southend-on-Sea Borough Council, Tendring District Council, Marine Management Organisation (MMO)

3 Fisheries: Commercial marine and estuarine

Commercial fishing activities categorised as Amber or Green under Defra's revised approach to commercial fisheries in EMSs are being assessed by Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA) to determine whether management is required. For activities categorised as Amber and Green these assessments should take account of any relevant in combination effects with other fishing activities. Shellfish dredging over subtidal habitats has been identified as an Amber activity and is considered a high priority for assessment and development of possible management for the site.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
3A	Where the assessments indicate management is required, introduce appropriate measures.	No cost	2016	Regulation: Creation / amendment of byelaws	n/a	Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	Natural England

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
3B	If management measures are established, ensure compliance with byelaw and provide an appropriate level of reporting to ensure sites are well managed and to enable Natural England to provide advice on the condition of features and potential condition threats.	No cost	2015-20	Enforcement: Byelaws	n/a	Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	Natural England

4 Planning Permission: general

Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development (perhaps summarised as sensitivity maps and matrices for the SIP area). Difficult issues include:

- (a) Assessing the cumulative effects of numerous, small and often 'non-standard' developments
- (b) Development outside the SPA/SAC boundaries can have negative impacts, particularly on the estuaries' birds
- (c) Assessing the indirect, 'knock-on' effects of proposals
- (d) Pressure to relax planning conditions on existing developments.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
4A	Extend the collation and spatial analysis of available data outlined for issue 2 (Public Access/ Disturbance) to include: <ul style="list-style-type: none"> • SAC interest features • variables related to types of development or other activities with potentially adverse effects on SAC or SPA interest features, whether as a result of disturbance or other causes. Summarise and disseminate the results to delivery partners, in particular local planning authorities, in user-friendly formats, such as sensitivity maps and matrices. Identify important knowledge gaps that need to be addressed.	£30,000	2015-18	Investigation / Research / Monitoring	Not yet determined	Natural England	Colchester Borough Council, Environment Agency, Essex County Council, Maldon District Council, Rochford District Council, Southend-on-Sea Borough Council, Tendring District Council

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
4B	Develop more detailed national guidance for the assessment of potential impacts on SPA waterbirds of new types of development and development pressure close to wetland SPAs (such as solar farms and winter occupancy of caravan parks) and on cumulative and indirect effects.	£2,000	2015-16	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a

5 Changes in species distributions

Declines in the numbers of some of the waterbird species using the Essex Estuaries SIP area may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change. For example, milder winters may be allowing birds to overwinter closer to their northern breeding grounds, or changes on the breeding grounds may be reducing breeding success. When assessing SPA condition, distinguishing these types of large-scale effect from effects produced by changes within the site itself is important.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
5A	For SPA species showing declines that British Trust for Ornithology (BTO) Wetland Bird Surveys (WeBS) Alerts (or other readily available information) suggest are at least partly due to site-level effects, analyse any additional evidence on factors likely to be affecting the species within and beyond the Essex Estuaries SIP area in order to assess more accurately the role of site-level changes and identify possible remedial action.	£30,000	2015-18	Investigation / Research / Monitoring	Not yet determined	Natural England	RSPB, British Trust for Ornithology (BTO)

6 Invasive species

An increase in Pacific oyster *Crassostrea gigas* settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. The importance of Pacific oysters for the local shellfish industry is recognised, however we would not like to see an overall increase in the extent of foreshore across the EMS populated by Pacific oysters. Other non-native invasive species such as the American whelk tingle *Urosalpinx cinerea* and Slipper limpet *Crepidula fornicata* are known to occupy subtidal muddy habitats, potentially impacting native communities through competition for resources and predation.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6A	Investigate the impacts of Pacific oysters <i>Crassostrea gigas</i> on features and subfeatures of the European Marine Site (EMS), paying particular attention to effects outside historically farmed areas. Other sites affected by Pacific oysters could be included in the study. Other marine non-native invasive species may also be of concern and require investigation. The risk of invasive species transfer by shipping and small boats should be considered.	£22,000	2015-18	Investigation / Research / Monitoring	Natural England	Natural England	Kent and Essex Inshore Fisheries Conservation Authority (IFCA)
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6B	Where investigation shows an impact to the condition of site features, management should be investigated with appropriate monitoring put in place.	£30,000	2018-20	Invasive Control Plan: Invasive Species Control Programme	Natural England, GB Non-native Species Secretariat (NNNS)	Natural England	Essex County Council, Essex Wildlife Trust, Ports And Harbour Authority(ies), RSPB, Shellfish Association of Great Britain (SAGB)

7 Fisheries: Recreational marine and estuarine

Recreational bait digging may impact waterbirds by reducing prey availability and creating disturbance in intertidal feeding areas. It could also damage the intertidal mudflats and sandflats and associated sub-features and communities, such as eelgrass beds. The extent of the activity and potential impacts on site features are not currently well understood.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
7A	Investigate the impact of bait digging on the features and subfeatures of the European Marine Site (EMS). This will require determining the extent of bait digging within the EMS and investigate management at a site level if required, placing emphasis on a voluntary code of conduct if possible.	£22,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Essex County Council	Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Local Authority(ies), Natural England

8 Fisheries: Commercial marine and estuarine

Bottom towed fishing gear (i.e. any fishing instrument designed to take sea fisheries resources from the seabed) has been categorised as a 'Red' for the interest features listed, specifically the seagrass beds *Zostera spp*, a sub-feature of the SAC, as part of Defra's revised approach to commercial fisheries management in European Marine Sites (EMS). Appropriate management measures will be implemented and enforced by Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA) who have put in place the 'Bottom Towed Fishing Gear Byelaw' within the SAC to prohibit the above fishing gear being used over the majority of known seagrass beds.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
8A	Introduce a byelaw	Nil, part of the IFCA's Statutory work	2015	Regulation: Creation / amendment of byelaws	Not yet determined, Inshore Fisheries Conservation Authority (IFCA)	Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	Natural England

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
8B	Ensure compliance with the byelaw and provide an appropriate level of reporting to ensure sites are well managed and to enable Natural England to provide advice on the condition of features and potential condition threats.	Nil, part of the IFCA's Statutory work	2015-20	Enforcement: Byelaws	Not yet determined, Inshore Fisheries Conservation Authority (IFCA)	Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	Natural England

9 Fisheries: Commercial marine and estuarine

Marine fisheries carried out under private rights, or under management defined in Several or Hybrid Orders, fall outside Defra's revised approach to commercial fisheries management in EMSs. A variety of fishing gears are used in these fisheries (e.g. Hydraulic and non hydraulic dredging and shore based activities (e.g. shellfish collection)) which may be applying pressure to site features, including abrasion of the seabed, visual disturbance, and habitat structure changes. Potential impacts need to be better understood and assessed with potential management introduced if required.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
9A	Investigate the impacts of private fisheries on the features and subfeatures on the EMS.	Nil, part of the IFCA's Statutory work	2015-16	Investigation / Research / Monitoring	Inshore Fisheries Conservation Authority (IFCA)	Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	Crown Estate (Marine), Essex Wildlife Trust, Local Authority(ies), Natural England, Landowner/occupier
9B	Where assessments indicate management is required in private fisheries, work with Relevant Authorities, site owners and occupiers to investigate and introduce appropriate regulation and ensure compliance.	Nil, part of the IFCA's Statutory work	2015-20	Regulation: Other - obtain appropriate permissions	Inshore Fisheries Conservation Authority (IFCA)	Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	Natural England

10 Invasive species

The invasive Common cord-grass *Spartina anglica* occurs widely within this site, as well as native Small cord-grass *Spartina maritima* in certain locations, and the site is designated for H1320 *Spartina* swards. There is a need to improve understanding of the dynamics of *S.anglica* on the site in order to determine if changes in the species' distribution adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
10A	Set up a monitoring scheme for <i>Spartina</i> species on the site. Use the monitoring results and information from previous studies to assess the effects of changes in <i>S.anglica</i> distribution on the site's SAC and SPA interest features.	£10,000	2015-18	Investigation / Research / Monitoring	Not yet determined	Natural England	Environment Agency
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
10B	Where monitoring results and information from previous studies indicate a negative impact to EMS features appropriate management should be introduced.	Not yet determined	2018-20	Invasive Control Plan: Invasive Species Control Programme	Not yet determined	Natural England	Environment Agency

11 Air Pollution: risk of atmospheric nitrogen deposition

Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
11A	Further investigate potential atmospheric nitrogen impacts on the site based on application of guidance from Chief Scientist Group Nitrogen Task and Finish Group.	Not yet determined	2015-17	Investigation / Research / Monitoring	Not yet determined	Not yet determined	Not yet determined

Site details

The tables in this section contain site-relevant contextual information and links

Qualifying features

#UK Special responsibility

Blackwater Estuary (Mid-Essex Coast Phase 4) SPA

A137(B) *Charadrius hiaticula*: Ringed plover

A141(NB) *Pluvialis squatarola*: Grey plover

Waterbird assemblage

A149(NB) *Calidris alpina alpina*: Dunlin

A195(B) *Sterna albifrons*: Little tern

A156(NB) *Limosa limosa islandica*: Black-tailed godwit

A082(NB) *Circus cyaneus*: Hen harrier

A046a(NB) *Branta bernicla bernicla*: Dark-bellied brent goose

A059(B) *Aythya ferina*: Common pochard

Colne Estuary (Mid-Essex Coast Phase 2) SPA

A137(B) *Charadrius hiaticula*: Ringed plover

Waterbird assemblage

A195(B) *Sterna albifrons*: Little tern

A162(NB) *Tringa totanus*: Common redshank

A082(NB) *Circus cyaneus*: Hen harrier

A046a(NB) *Branta bernicla bernicla*: Dark-bellied brent goose

A059(B) *Aythya ferina*: Common pochard

Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA

Waterbird assemblage

Dengie (Mid-Essex Coast Phase 1) SPA

A046a(NB) *Branta bernicla bernicla*: Dark-bellied brent goose

A141(NB) *Pluvialis squatarola*: Grey plover

Waterbird assemblage

A143(NB) *Calidris canutus*: Red knot

A082(NB) *Circus cyaneus*: Hen harrier

A046a(NB) *Branta bernicla bernicla*: Dark-bellied brent goose

Essex Estuaries SAC

H1130 Estuaries

H1140 Mudflats and sandflats not covered by seawater at low tide

H1110 Sandbanks which are slightly covered by sea water all the time

H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

H1310 Salicornia and other annuals colonising mud and sand

H1320 Spartina swards (*Spartinion maritimae*)

H1420 Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)

Foulness (Mid-Essex Coast Phase 5) SPA

A137(B) *Charadrius hiaticula*: Ringed plover

A141(NB) *Pluvialis squatarola*: Grey plover

Waterbird assemblage

A143(NB) *Calidris canutus*: Red knot

A191(B) *Sterna sandvicensis*: Sandwich tern

A195(B) *Sterna albifrons*: Little tern

A193(B) *Sterna hirundo*: Common tern

A157(NB) *Limosa lapponica*: Bar-tailed godwit

A162(NB) *Tringa totanus*: Common redshank

A082(NB) *Circus cyaneus*: Hen harrier

A130(NB) *Haematopus ostralegus*: Eurasian oystercatcher

A132(B) *Recurvirostra avosetta*: Pied avocet

A046a(NB) *Branta bernicla bernicla*: Dark-bellied brent goose

Site location and links

Blackwater Estuary (Mid-Essex Coast Phase 4) SPA

Area (ha) **4395.15** Grid reference **TL978100** [Map link](#)

Local Authorities Essex

Site Conservation Objectives [European Site Conservation Objectives for Blackwater Estuary \(Mid-Essex Coast Phase 4\) SPA](#)

European Marine Site conservation advice [n/a](#)

Regulation 33/35 Package [n/a](#)

Marine Management Organisation site plan [n/a](#)

Colne Estuary (Mid-Essex Coast Phase 2) SPA

Area (ha) **2701.43** Grid reference **TM040172** [Map link](#)

Local Authorities Essex

Site Conservation Objectives [European Site Conservation Objectives for Colne Estuary \(Mid-Essex Coast Phase 2\) SPA](#)

European Marine Site conservation advice [n/a](#)

Regulation 33/35 Package [n/a](#)

Marine Management Organisation site plan [n/a](#)

Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA

Area (ha) **1735.58** Grid reference **TQ881970** [Map link](#)

Local Authorities Essex

Site Conservation Objectives [European Site Conservation Objectives for Crouch & Roach Estuaries \(Mid-Essex Coast Phase 3\) SPA](#)

European Marine Site conservation advice [n/a](#)

Regulation 33/35 Package [n/a](#)

Marine Management Organisation site plan [n/a](#)

Dengie (Mid-Essex Coast Phase 1) SPA

Area (ha) **3127.23** Grid reference **TM045033** [Map link](#)

Local Authorities Essex

Site Conservation Objectives [European Site Conservation Objectives for Dengie \(Mid-Essex Coast Phase 1\) SPA](#)

European Marine Site conservation advice [n/a](#)

Regulation 33/35 Package [n/a](#)

Marine Management Organisation site plan [n/a](#)

Essex Estuaries SAC

Area (ha) **46140.82** Grid reference **TM103048** [Map link](#)

Local Authorities Essex

Site Conservation Objectives [European Site Conservation Objectives for Essex Estuaries SAC](#)

European Marine Site conservation advice [Essex Estuaries EMS](#)

Regulation 33/35 Package [Regulation 33/35 package link](#)

Marine Management Organisation site plan [n/a](#)

Foulness (Mid-Essex Coast Phase 5) SPA

Area (ha) **10968.9** Grid reference **TR024902** [Map link](#)

Local Authorities Essex

Site Conservation Objectives [European Site Conservation Objectives for Foulness \(Mid-Essex Coast Phase 5\) SPA](#)

European Marine Site conservation advice [n/a](#)

Regulation 33/35 Package [n/a](#)

Marine Management Organisation site plan [n/a](#)

Water Framework Directive (WFD)

The Water Framework Directive (WFD) provides the main framework for managing the water environment throughout Europe. Under the WFD a management plan must be developed for each river basin district. The River Basin Management Plans (RBMP) include a summary of the measures needed for water dependent Natura 2000 sites to meet their conservation objectives. For the second round of RBMPs, SIPs are being used to capture the priorities and new measures required for water dependent habitats on Natura 2000 sites. SIP actions for non-water dependent sites/habitats do not form part of the RBMPs and associated consultation.

Blackwater Estuary (Mid-Essex Coast Phase 4) SPA

River basin	Anglian RBMP
WFD Management catchment	Combined Essex
WFD Waterbody ID (Cycle 2 draft)	GB105037033800, GB105037041160

Colne Estuary (Mid-Essex Coast Phase 2) SPA

River basin	Anglian RBMP
WFD Management catchment	Combined Essex
WFD Waterbody ID (Cycle 2 draft)	GB105037034170, GB105037034200, GB105037041310

Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA

River basin	Anglian RBMP
WFD Management catchment	Combined Essex
WFD Waterbody ID (Cycle 2 draft)	GB105037028560, GB105037028570

Dengie (Mid-Essex Coast Phase 1) SPA

River basin	Anglian RBMP
WFD Management catchment	Combined Essex
WFD Waterbody ID (Cycle 2 draft)	n/a

Essex Estuaries SAC

River basin	Anglian RBMP
WFD Management catchment	Combined Essex
WFD Waterbody ID (Cycle 2 draft)	GB105037028560, GB105037028570, GB105037033800, GB105037034170, GB105037034200, GB105037041160, GB105037041310

Foulness (Mid-Essex Coast Phase 5) SPA

River basin	Anglian RBMP
WFD Management catchment	Combined Essex

WFD Waterbody ID (Cycle 2 draft)

n/a

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	Blackwater Estuary SSSI
Colne Estuary (Mid-Essex Coast Phase 2) SPA	Upper Colne Marshes SSSI Colne Estuary SSSI
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA	Crouch & Roach Estuaries SSSI
Dengie (Mid-Essex Coast Phase 1) SPA	Crouch & Roach Estuaries SSSI Dengie SSSI
Essex Estuaries SAC	Upper Colne Marshes SSSI Blackwater Estuary SSSI Foulness SSSI Crouch & Roach Estuaries SSSI Dengie SSSI Colne Estuary SSSI
Foulness (Mid-Essex Coast Phase 5) SPA	Foulness SSSI
National Nature Reserve (NNR)	
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	Blackwater Estuary NNR
Colne Estuary (Mid-Essex Coast Phase 2) SPA	Colne Estuary NNR
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA	Dengie NNR
Dengie (Mid-Essex Coast Phase 1) SPA	Dengie NNR
Essex Estuaries SAC	Blackwater Estuary NNR Colne Estuary NNR Dengie NNR
Foulness (Mid-Essex Coast Phase 5) SPA	n/a
Ramsar	

Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	Blackwater Estuary (Mid Essex Coast Phase 4)
Colne Estuary (Mid-Essex Coast Phase 2) SPA	Colne Estuary (Mid Essex Coast Phase 2) n/a
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA	Crouch & Roach Estuaries (Mid Essex Coast Phase 3)
Dengie (Mid-Essex Coast Phase 1) SPA	Dengie (Mid Essex Coast Phase 1) Crouch & Roach Estuaries (Mid Essex Coast Phase 3) Dengie (Mid Essex Coast Phase 1)
Essex Estuaries SAC	Blackwater Estuary (Mid Essex Coast Phase 4) Colne Estuary (Mid Essex Coast Phase 2) Crouch & Roach Estuaries (Mid Essex Coast Phase 3) Dengie (Mid Essex Coast Phase 1) Foulness (Mid Essex Coast Phase 5)
Foulness (Mid-Essex Coast Phase 5) SPA	Foulness (Mid Essex Coast Phase 5)

Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

Blackwater Estuary (Mid-Essex Coast Phase 4) SP	Essex Estuaries SAC
Colne Estuary (Mid-Essex Coast Phase 2) SPA	Essex Estuaries SAC
Crouch & Roach Estuaries (Mid-Essex Coast Phas	Essex Estuaries SAC
Dengie (Mid-Essex Coast Phase 1) SPA	Essex Estuaries SAC
Essex Estuaries SAC	Foulness (Mid-Essex Coast Phase 5) SPA Dengie (Mid-Essex Coast Phase 1) SPA Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA Colne Estuary (Mid-Essex Coast Phase 2) SPA Blackwater Estuary (Mid-Essex Coast Phase 4) SPA
Foulness (Mid-Essex Coast Phase 5) SPA	Essex Estuaries SAC

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	01/04/2015	

www.naturalengland.org.uk/ipens2000



EC Directive 79/409 on the conservation of wild birds: Special Protection Area

Mid-Essex Coast

Blackwater Estuary

The Mid-Essex Coast comprises an extensive complex of estuaries and intertidal sand and silt flats, including several islands, shingle and shell beaches and extensive areas of saltmarsh. The proposed Special Protection Area follows the boundaries of five SSSIs: the Colne Estuary, the Blackwater Estuary, Dengie, the River Crouch Marshes and Foulness.

The Blackwater Estuary qualifies under Article 4.1 of the Birds Directive by supporting, in summer, nationally important breeding populations of an Annex 1 species, the little tern *Sterna albifrons*. Between 1987 and 1991 a mean of 73 pairs (3% of British breeding population) bred in the Mid-Essex Coast area. The Blackwater Estuary is one of several sites within the proposed SPA where these birds nest.

The Blackwater Estuary also qualifies under Article 4.1 by regularly supporting nationally important wintering populations of an Annex 1 species, the hen harrier *Circus cyaneus*. During the period 1987/88 to 1991/92 a mean of 19 birds (2% of the British total) occurred in the Mid-Essex Coast area. The Blackwater Estuary is one of a number of sites used in the area.

The Blackwater Estuary qualifies under Article 4.2 by supporting, in summer, nationally important populations of two regularly occurring migratory species. Between 1987 and 1991 a mean of 15 pairs (7% of British) of pochard *Aythya ferina* and 135 pairs (1% of British) of ringed plover *Charadrius hiaticula* bred in the proposed SPA. The Blackwater Estuary is one of a number of sites used.

The estuary also qualifies under Article 4.2 as a wetland of international importance by regularly supporting, in winter over, 20,000 waterfowl. In the five year period 1987/88 to 1991/92 the average peak count was 46,552 birds, comprising 16,059 wildfowl and 30,493 waders. The Blackwater Estuary regularly supports in winter internationally important numbers of the following four species of migratory waterfowl (average peak counts for the period 1987/88 to 1991/92): 8,761 dark-bellied brent geese *Branta bernicla bernicla* (5.1% of total world population, 9.7% of British population), 2,172 grey plover *Pluvialis squatarola* (1.2% of East Atlantic Flyway (EAF) population, 10.2% of British), 17,743 dunlin *Calidris alpina* (1.2% EAF, 4% of British) and 755 black-tailed godwit *Limosa limosa* (1.1% EAF, 15.8% of British).

The Blackwater Estuary also supports nationally important wintering populations of a further eight species: 243 cormorant *Phalacrocorax carbo* (1.2% of British), 2,425 shelduck *Tadorna tadorna* (3.2% of British), 69 gadwall *Anas strepera* (1.1% of British), 2,190 teal *Anas crecca* (2.1% of British), 315 goldeneye *Bucephala clangula* (2.1% of British), 338 ringed plover *Charadrius hiaticula* (1.4% of British), 1,847 curlew *Numenius arquata* (2% of British), 1,079 redshank *Tringa totanus* (1.4% of British).

During severe winter weather the Blackwater Estuary (and the whole Mid-Essex Coast) can assume even greater national and international importance as wildfowl and waders from many other areas arrive, attracted by the relatively mild climate and the abundant food resources available in this Special Protection Area.

SPA Citation
CAR September 1993

**European Site Conservation Objectives for
Blackwater Estuary (Mid-Essex Coast Phase 4)
Special Protection Area
Site Code: UK9009245**



With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)

A059 *Aythya ferina*; Common pochard (Breeding)

A082 *Circus cyaneus*; Hen harrier (Non-breeding)

A137 *Charadrius hiaticula*; Ringed plover (Breeding)

A141 *Pluvialis squatarola*; Grey plover (Non-breeding)

A149 *Calidris alpina alpina*; Dunlin (Non-breeding)

A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)

A195 *Sterna albifrons*; Little tern (Breeding)

Waterbird assemblage

This is a European Marine Site

This SPA is a part of the Essex Estuaries European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: RIS@JNCC.gov.uk

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DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 12 May 1995

3. Country:

UK (England)

4. Name of the Ramsar site:

Blackwater Estuary (Mid-Essex Coast Phase 4)

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area:

** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

b) **Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

51 45 13 N 00 51 59 E

9. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Colchester

The Blackwater Estuary is a large estuary between the Dengie peninsula and Mersea Island on the Essex coast. It stretches from immediately adjacent to Maldon and about 8 km south of Colchester.

Administrative region: Essex

10. Elevation (average and/or max. & min.) (metres): **11. Area** (hectares): 4395.15

Min.	-1
Max.	4
Mean	1

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The Blackwater Estuary is the largest estuary in Essex north of the Thames and, is one of the largest estuarine complexes in East Anglia. Its mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering waterfowl. Shingle and shell banks and offshore islands are also a feature of the tidal flats. The surrounding terrestrial habitats; the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland are also of high conservation interest. This rich mosaic of habitats supports an outstanding assemblage of nationally scarce plants and a nationally important assemblage of rare invertebrates. There are 16 British Red Data Book species and 94 notable and local species.

13. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1, 2, 3, 5, 6

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 1

Qualifies by virtue of the extent and diversity of saltmarsh habitat present. This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237 ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.

Ramsar criterion 2

The invertebrate fauna is well represented and includes at least 16 British Red Data Book species. In descending order of rarity these are: Endangered: a water beetle *Paracymus aeneus*; Vulnerable: a damselfly *Lestes dryas*, the flies *Aedes flavescens*, *Erioptera bivittata*, *Hybomitra expollicata* and the spiders *Heliophanus auratus* and *Trichopterna cito*; Rare: the beetles *Baris scolopacea*, *Philonthus punctus*, *Graptodytes bilineatus* and *Malachius vulneratus*, the flies *Campsicemus magius* and *Myopites eximia*, the moths *Idaea ochrata* and *Malacosoma castrensis* and the spider *Euophrys*.

Ramsar criterion 3

This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

105061 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6 – species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in winter:

Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ,	8689 individuals, representing an average of 4% of the population (5 year peak mean 1998/9-2002/3)
Grey plover, <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering	4215 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)
Dunlin, <i>Calidris alpina alpina</i> , W Siberia/W Europe	27655 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)
Black-tailed godwit, <i>Limosa limosa islandica</i> , Iceland/W Europe	2174 individuals, representing an average of 6.2% of the population (5 year peak mean 1998/9-2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in winter:

Common shelduck, <i>Tadorna tadorna</i> , NW Europe	3141 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)
European golden plover, <i>Pluvialis apricaria apricaria</i> , P. a. altifrons Iceland & Faroes/E Atlantic	16083 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)

Common redshank , *Tringa totanus totanus*, 4169 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.

See Sections 21/22 for details of noteworthy species

Details of bird species occurring at levels of National importance are given in Section 22

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	neutral, shingle, mud, clay, nutrient-rich, sedimentary
Geomorphology and landscape	lowland, coastal, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), estuary, islands
Nutrient status	eutrophic
pH	circumneutral
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly organic
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5

General description of the Physical Features:

The Blackwater Estuary is the largest estuary in Essex and is one of the largest estuarine complexes in East Anglia. Its mudflats are fringed by saltmarsh on the upper shores, with shingle, shell banks and offshore islands a feature of the tidal flats. The surrounding terrestrial habitats: the sea-wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland, are of high conservation interest.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Blackwater Estuary is the largest estuary in Essex and is one of the largest estuarine complexes in East Anglia. Its mudflats are fringed by saltmarsh on the upper shores, with shingle, shell banks and offshore islands a feature of the tidal flats. The surrounding terrestrial habitats: the sea-wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland, are of high conservation interest.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping

19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	48
H	Salt marshes	37.5
4	Seasonally flooded agricultural land	5.1
Tp	Freshwater marshes / pools: permanent	4.1
J	Coastal brackish / saline lagoons	2.6
M	Rivers / streams / creeks: permanent	0.9
K	Coastal fresh lagoons	0.9
E	Sand / shingle shores (including dune systems)	0.9

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

At low tide a vast expanse of intertidal mud is exposed from shore to shore. This enriched mud is a feeding ground for variety of molluscs, crustaceans and worms, and encourages the growth of the green algae *Enteromorpha*, and eelgrass *Zostera* spp. at the seaward edges of the saltings. Wildfowl and waders amass to exploit this rich food supply in numbers over twice the maximum required to confer international status to the site.

On arrival in October, brent geese feed in the estuary on *Enteromorpha* and *Zostera*. All three species, *Zostera marina*, *Z. angustifolia*, *Z. noltei*, once formed large beds in the estuary but are now scarce. This decline in eelgrasses combined with a recovery in brent geese numbers in the 1970s, prompted a change in feeding habits and the geese now spend more time landward of the sea wall grazing on arable crops and improved grassland. Areas of improved, reseeded grassland are managed for brent geese at Old Hall, Goldhanger, Steeple, and Osea and Northey Islands. The inclusion of these established grassland feeding areas within the SSSI will continue to help ease the pressure on arable land.

The Blackwater Estuary contains the largest area of saltmarsh in Essex (1,102.85 ha), representing the fifth-largest area in Great Britain; though, like other saltmarshes on this coastline, much of it is eroding at a rate of between 0.3-1 m each year. The saltings serve as important high tide wader roosts and support a specialised flora grazed by wigeon and brent geese. Large expanses of saltings exist at Tollesbury and Old Hall and along the northern shore of the Salcott Channel. At high tide, they accommodate large roosting populations of dunlin, grey plover and curlew. The inlet marshes of Gor

Saltings, Cooper's and Steeple Creeks, and the saltings associated with Northey and Osea Islands, also act as high tide refuges for dense populations of waders.

Ray Island, in the Strood Channel, is one of the few sites in Essex where the transition from saltmarsh to grassland has not been truncated by the imposition of a sea wall. However, elsewhere, the saltings fronting the sea wall also show distinct zones of vegetation. The lower marsh is comprised of the primary colonisers of mud - glassworts *Salicornia* spp., including the nationally scarce *S. perennis* and *S. pusilla* and the invasive common cord-grass *Spartina anglica*. The scarce native small cord-grass *Spartina maritima* can still be found in places, despite the incursions of the more vigorous hybrid form. Further up the marsh, where tidal immersions are less frequent, sea purslane *Atriplex portulacoides* and common saltmarsh-grass *Puccinellia maritima* predominate, with sea aster *Aster tripolium* and common sea lavender *Limonium vulgare*. The nationally scarce lax-flowered sea lavender *Limonium humile* is sometimes interspersed among the more common species, but the main site for this is at Old Hall. Scarce saltmarsh grasses usually associated with the higher zone of the marsh, such as stiff saltmarsh-grass *Puccinellia rupestris* and Borrer's saltmarsh grass *Puccinellia fasciculata*, are encountered growing behind the sea wall in wheel-ruts along the folding. Two Mediterranean plants at the northerly limit of their distributions, golden-samphire *Inula crithmoides* and shrubby sea blite *Suaeda vera*, in the absence of high marsh, having adapted to growing at the base and outer face of the sea wall. Shrubby sea-blite is also able to colonise unstable shingle along the drift line and large populations are present at West Mersea and Osea Island.

The higher wave energies at creek mouths and the upper reaches of the estuary promote the deposition of shingle and sand.

Where this has occurred on the foreshore at West Mersea the county rarity, sea spurge *Euphorbia paralias*, has been discovered along with sea mayweed *Tripleurospermum maritimum*, which has a limited distribution in Essex. The sandy parts of the beach have a typical plant community of sand couch *Elytrigia juncea*, marram *Ammophila arenaria* and the very local sea-holly *Eryngium maritimum*, while frosted orache *Atriplex laciniata* occurs on the drift line. This section of coastline shows a transition from saltmarsh to freshwater marsh backed by a sandy cliff face.

The clay sea wall surrounding the estuary, as well as harbouring many of the species which would otherwise have colonised the sheltered, high-level marsh, also contains plants more typically associated with grazing marsh. This type of community develops where the topography and management of the grassland mimic conditions of the grazing marshes beyond - well-drained, grazed slopes and/or areas of disturbed ground. The nationally scarce slender hare's-ear *Bupleurum tenuissimum* is frequent along the footpath edge, and the uncommon strawberry clover *Trifolium fragiferum* is present in the close-cropped sward. The brackish-water borrow dykes also contain a similar species complement to the ditches of the land-claimed estuarine marsh.

The extensive unmown stretches of the sea wall are dominated largely by sea couch *Elytrigia atherica*, common couch *E. repens*, with herbs such as wild carrot and the regionally notable grass vetchling and the nationally uncommon dittander *Lepidium latifolium*. The tall grasslands of the Essex coast are the British stronghold of the nationally uncommon Roesel's bush-cricket *Metrioptera roeselli*, whilst two other characteristic species, the short-winged conehead *Conocephalus dorsalis*, another bush-cricket, and the Essex skipper butterfly *Thymelicus lineola* are also abundant.

Landward of the sea wall, extensive areas of grazing marsh have survived at Old Hall and Tollesbury, while, elsewhere, only fragments remain among the arable land and patches of improved, levelled pasture. Grazing of these ancient marshes since their enclosure in the Middle Ages, have created a characteristic undulating landscape, with the channels of the old saltmarsh creeks still evident. The ant hills of the yellow meadow ant *Lasius flavus* give credence to the antiquity of the landscape, their dry mounds of spoil providing a micro-habitat for common whitlowgrass *Erophila verna* and the nationally scarce upright chickweed *Moenchia erecta*. The grassy sward is dominated by creeping bent *Agrostis stolonifera*, perennial rye-grass *Lolium perenne* and, red fescue *Festuca rubra*, with abundant meadow barley *Hordeum secalinum* and meadow foxtail *Alopecurus pratensis*. Crested dog's-tail *Cynosurus cristatus* and yellow oat-grass *Trisetum flavescens*, grasses indicative of relict grassland, have a frequent distribution while marsh foxtail *Alopecurus geniculatus* is locally abundant in the wetter low-ways. Traditional plants of estuarine grazing marsh occur within the turf including hairy buttercup *Ranunculus sardous* and the nationally scarce divided sedge *Carex divisa* and a variety of leguminous species: spiny rest-harrow *Ononis spinosa*, narrow-leaved bird's-foot-trefoil *Lotus tenuis* and common bird's-foot-trefoil *Lotus corniculatus*, plus the nationally scarce sea clover *Trifolium squamosum* and bird's-foot clover *T. ornithopodioides*. Two further nationally scarce species, mouse-tail *Myosurus minimus* and red goosefoot *Chenopodium botryoides* occur on disturbed ground, the former frequently colonising sheep tracks and gateways.

The ditch systems of the Blackwater's coastal marshes have a diverse range of plant species that mark the transition from saline to freshwater. A saline influence is indicated by stands of the saltmarsh rush *Juncus gerardii*, and the tasselweeds, beaked tasselweed *Ruppia maritima* and the nationally scarce spiral tasselweed *Ruppia cirrhosa*. Where the water is less saline, sea club-rush *Bolboschoenus maritimus* becomes the dominant emergent species, along with several aquatics including two nationally scarce species, brackish water-crowfoot *Ranunculus baudotii* and soft hornwort *Ceratophyllum submersum*, which occur among the more frequent fennel pondweed *Potamogeton pectinatus* and spiked water-millfoil *Myriophyllum spicatum*. The transition to freshwater is demarcated by stands of common reed *Phragmites australis* and reedmace *Typha* spp. Farther inland, species characteristic of the swamp-fed community are encountered, such as reed sweet-grass *Glyceria maxima* and branched bur-reed *Sparganium erectum*.

Ecosystem services

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Nationally important species occurring on the site.

Higher Plants.

Bupleurum tenuissimum (nationally scarce), *Carex divisa* (nationally scarce), *Chenopodium chenopodioides* (RDB Lower risk (not threatened)), *Limonium humile* (nationally scarce), *Hordeum marinum* (nationally scarce), *Zostera noltei* (nationally scarce), *Zostera marina* (nationally scarce), *Zostera angustifolia* (nationally scarce), *Sarcocornia perennis* (nationally scarce), *Salicornia pusilla* (nationally scarce), *Puccinellia rupestris* (nationally scarce), *Puccinellia fasciculata* (nationally scarce), *Inula crithmoides* (nationally scarce), *Trifolium squamosum* (nationally scarce) and *Ruppia cirrhosa* (nationally scarce).

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Birds

Species currently occurring at levels of national importance:

Species regularly supported during the breeding season:

Mediterranean gull , *Larus melanocephalus*, Europe 4 apparently occupied nests, representing an average of 3.7% of the GB population (Seabird 2000 Census)

Common tern , *Sterna hirundo hirundo*, N & E Europe 121 apparently occupied nests, representing an average of 1.1% of the GB population (Seabird 2000 Census)

Little tern , *Sterna albifrons albifrons*, W Europe 99 apparently occupied nests, representing an average of 5% of the GB population (Seabird 2000 Census)

Species with peak counts in spring/autumn:

Ringed plover , *Charadrius hiaticula*, Europe/Northwest Africa 714 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)

Whimbrel , *Numenius phaeopus*, Europe/Western Africa 272 individuals, representing an average of 9% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak)

Eurasian curlew , *Numenius arquata arquata*, N. a. arquata Europe (breeding) 1959 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)

Spotted redshank , *Tringa erythropus*, Europe/W Africa 36 individuals, representing an average of 26.4% of the GB population (5 year peak mean 1998/9-2002/3)

Common greenshank , *Tringa nebularia*, Europe/W Africa 149 individuals, representing an average of 24.9% of the GB population (5 year peak mean 1998/9-2002/3)

Ruddy turnstone , *Arenaria interpres interpres*, NE Canada, Greenland/W Europe & NW Africa 664 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak)

Species with peak counts in winter:

Slavonian grebe , *Podiceps auritus*, Northwest Europe 11 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)

Great cormorant , *Phalacrocorax carbo carbo*, NW Europe 286 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)

Little egret , *Egretta garzetta*, West Mediterranean 33 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)

Eurasian wigeon , *Anas penelope*, NW Europe 5614 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)

Eurasian teal , *Anas crecca*, NW Europe 2932 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)

Northern pintail , <i>Anas acuta</i> , NW Europe	396 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Common goldeneye , <i>Bucephala clangula clangula</i> , NW & C Europe	260 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Red-breasted merganser , <i>Mergus serrator</i> , NW & C Europe	129 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
Hen harrier, <i>Circus cyaneus</i> , Europe	<19 individuals, representing an average of 2.5% of the GB population (5 year mean 1987/8-1991/2)
Water rail , <i>Rallus aquaticus</i> , Europe	9 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , <i>Recurvirostra avosetta</i> , Europe/Northwest Africa	424 individuals, representing an average of 12.4% of the GB population (5 year peak mean 1998/9-2002/3)
Northern lapwing , <i>Vanellus vanellus</i> , Europe - breeding	16944 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Red knot , <i>Calidris canutus islandica</i> , W & Southern Africa (wintering)	3864 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
Sanderling , <i>Calidris alba</i> , Eastern Atlantic	229 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Ruff , <i>Philomachus pugnax</i> , Europe/W Africa	42 individuals, representing an average of 6% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

Nationally important species occurring on the site.

Invertebrates.

Paracymus aeneus (RDB1), *Lestes dryas* (RDB2), *Aedes flavescens* (RDB2), *Erioptera bivittata* (RDB2), *Hybomitra expollicata* (RDB1), *Heliophanus auratus* (RDB2), *Trichopterna cito* (RDB2), *Baris scolopacea* (RDB3), *Philonthus punctus* (RDB3), *Graptodytes bilineatus* (RDB3), *Malachius vulneratus* (RDB3), *Campsicemus magius* (RDB3), *Myopites eximia* (RDB3), *Idaea ochrata* (RDB3), *Malacosoma castrensis* (RDB3) and *Euophrys* sp. (*Euophrys browningi* is rare and endemic to Great Britain. A UKBAP species) .

23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Archaeological/historical site
- Environmental education/ interpretation
- Fisheries production
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing

Sport hunting
 Tourism
 Traditional cultural
 Transportation/navigation

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide 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) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where 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:

24. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	+
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Marine/saltwater aquaculture	+	+
Gathering of shellfish	+	+
Bait collection	+	+
Permanent arable agriculture	+	+
Grazing (unspecified)	+	+
Hunting: recreational/sport	+	
Industry		+
Sewage treatment/disposal	+	
Harbour/port	+	+
Flood control	+	
Transport route	+	
Urban development		+

Non-urbanised settlements	+	+
Military activities		+

26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2		+		+
Pollution – agricultural fertilisers	2	Arable agriculture surrounds the coastal wetland and run-off from fields enters the site.		+	

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?
 Erosion - The Essex Coast and Estuaries Coastal Habitat Management Plan (CHaMP) (Anon. 2002) covers the site and it is expected to inform the shoreline management plan as well as local plan policies.

A Shoreline Management Plan has been prepared (but not yet implemented) for the Essex Coast which seems to provide a blueprint for managing the coastline sustainably.

Pollution – agricultural fertilisers - The Water Framework Directive, which will soon come into force, should manage water quality throughout the system.

Is the site subject to adverse ecological change? YES

27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	+
National Nature Reserve (NNR)	+	+
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	+
Management agreement	+	

Site management statement/plan implemented	+	
Special Area of Conservation (SAC)	+	
Management plan in preparation	+	

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Contemporary.

Environment.

EN/Defra experimental managed retreat site adjacent to site.

Ongoing hydrodynamic surveys.

Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

Site Unit Recording.

Environment Agency low tide counts (five yearly).

Marine Nature Conservation Review: identification of intertidal biotopes (Hill *et al.* 1996)

Completed.

Saltmarsh survey 1988.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

As a result of the English Nature estuaries initiative there is a Blackwater Estuary Management Plan. The Blackwater Estuary Implementation Officer provides educational activities along with the Essex Wildlife Trust, RSPB and English Nature conservation officers.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities, Facilities provided and Seasonality.

Caravan parks - March to November.

Dog walking - all year - no facilities.

Bird watching - all year - this can be done via local wildlife trust and the RSPB reserves.

Sailing - predominantly summer - there are marinas and moorings for boats.

Jet-skiing - summer only - there is a licensed area and access to open water provided at West Mersea.

Water-skiing - predominantly summer - there is a zoned area.

Power-boating - predominantly summer - access ramps, moorings and marinas.

Walking - all year - no facilities.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.
 Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs,
 European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol,
 BS1 6EB

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House,
 Northminster Road, Peterborough, PE1 1UA, UK

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Site-relevant references

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- Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough
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