Appendix I: European Site Characterisations

Special Areas of Conservation

1. Essex Estuaries SAC

Special Protection Areas

2. Benfleet and Southend Marshes SPA
3. Blackwater Estuary SPA
4. Crouch and Roach Estuaries SPA
5. Dengie SPA
6. Foulness SPA
7. Medway Estuary and Marshes SPA
8. Thames Estuary and Marshes SPA

Ramsar Sites

9. Benfleet and Southend Marshes Ramsar
10. Blackwater Estuary Ramsar
11. Crouch and Roach Estuaries Ramsar
12. Dengie Ramsar
13. Foulness Ramsar
14. Medway Estuary and Marshes Ramsar
15. Thames Estuary and Marshes Ramsar

Special Areas of Conservation (SAC)

Site Name: Essex Estuaries **Location Grid Ref: TM103048** **JNCC Site Code: UK0013690** **Size (ha): 46140.82** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	This is a large estuarine site in south-east England, and 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 and is important as an extensive area of contiguous estuarine habitat. 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. Sublittoral areas have a very rich invertebrate fauna, including the reef-building worm *Sabellaria spinulosa*, the brittlestar *Ophiothrix fragilis*, crustaceans and ascidians. The site also has large areas of saltmarsh and other important coastal habitats.
Qualifying Features	**Annex I habitats that are a primary reason for selection of this site:** ▪ Estuaries ▪ Mudflats and sandflats not covered by seawater at low tide ▪ Salicornia and other annuals colonising mud and sand ▪ Spartina swards (*Spartinion maritimae*) ▪ Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) ▪ Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) **Annex I habitats present as a qualifying feature:** ▪ Sandbanks which are slightly covered by sea water all the time
Conservation Objectives	With regard to the natural habitats and/or species for which the site has been designated (the Qualifying Features);

Site Name: Essex Estuaries **Location Grid Ref: TM103048** **JNCC Site Code: UK0013690** **Size (ha): 46140.82** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features. Subject to natural change, to maintain or restore: ▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species; ▪ The structure and function (including typical species) of qualifying natural habitats and habitats of qualifying species; ▪ The supporting processes on which qualifying natural habitats and habitats of qualifying species rely; ▪ The populations of qualifying species; ▪ The distribution of qualifying species within the site.
Component SSSIs	▪ Blackwater Estuary ▪ Crouch and Roach Estuaries ▪ Colne Estuary ▪ Foulness ▪ Dengie
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss and Fragmentation** ▪ The saltmarshes and mudflats are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation. **Increased Water Pollution** ▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban)

Site Name: Essex Estuaries Location Grid Ref: TM103048 JNCC Site Code: UK0013690 Size (ha): 46140.82 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources. **Physical Disturbance** ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ Visual presence (e.g. recreational activity). **Biological Disturbance** ▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

Special Protection Areas (SPA)

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK9009171** **Size (ha): 2251.31** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Benfleet and Southend Marshes are located on the north shore of the outer Thames Estuary in southern England. The site comprises an extensive series of saltmarshes, cockle shell banks, mud-flats, and grassland that supports a diverse flora and fauna. The productive mud-flats, cockle shell banks and diverse saltmarsh communities provide a wide range of feeding and roosting opportunities for internationally important numbers of wintering wildfowl and waders.
Qualifying Features	**Article 4.2 Qualification (79/409/EEC)** Over winter the area regularly supports: ▪ Dark-bellied Brent Goose (*Branta bernicla bernicla*) 1.3% of the population ▪ Dunlin (*Calidris alpina alpine)* 2.1% of the population in Great Britain ▪ Knot (*Calidris canutus)* 2.6% of the population ▪ Ringed Plover (*Charadrius hiaticula)* 1.3% of the population in Great Britain ▪ Grey Plover (*Pluvialis squatarola*) 2.3% of the population **Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage Of Birds** Over winter the area regularly supports: ▪ 34789 waterfowl (5 year peak mean 30/06/1999) Including: *Branta bernicla bernicla*, *Charadrius hiaticula*, *Pluvialis squatarola*, *Calidris canutus*, *Calidris alpine alpina*.

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK9009171** **Size (ha): 2251.31** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features); **Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.** Subject to natural change, to maintain or restore: ▪ 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 populations of the qualifying features; ▪ The distribution of the qualifying features within the site.
Component SSSIs	▪ Beenfleet and Southend Marshes
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss and Fragmentation** ▪ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation.

Site Name: Benfleet and Southend Marshes Location (Lat & Long): 51 31 42 N 00 41 00 E JNCC Site Code: UK9009171 Size (ha): 2251.31 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	Increased Water Pollution ▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources. **Physical Disturbance** ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ The Natura 2000 data form states that recreational activity is not a problem, however infrastructure works to facilitate visitor attractions are leading to piecemeal development which is dealt with under the planning control provisions of the Habitat Regulations. **Biological Disturbance** ▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

Site Name: Blackwater Estuary **Location (Lat & Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK9009245** **Size (ha): 4395.15** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Blackwater Estuary is located on the coast of Essex in eastern England. It is the largest estuary in Essex and is one of the largest estuarine complexes in East Anglia. Its mud-flats 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. The diversity of estuarine habitats results in the sites being of importance for a wide range of overwintering waterbirds, including raptors, geese, ducks and waders. The site is also important in summer for breeding terns.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **During the breeding season the area regularly supports:** ▪ Little Tern *(Sterna albifrons)* (Eastern Atlantic - breeding) at least 0.9% of the GB breeding population 5 year mean, 1992-1996 **Over winter the area regularly supports:** ▪ Hen Harrier *(Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987/8-1991/2 **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** **During the breeding season the area regularly supports:**

Site Name: Blackwater Estuary Location (Lat & Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK9009245 Size (ha): 4395.15 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ Common Pochard *(Aythya ferina)* (North-western/North-eastern Europe) up to 6% of the population in Great Britain 5 year mean, 1987-1991 ▪ Ringed Plover *(Charadrius hiaticula)* (Europe/Northern Africa - wintering) up to 1.6% of the population in Great Britain 5 year mean, 1987-1991 **Over winter the area regularly supports:** ▪ Brant Goose (*Branta bernicla bernicla)* (Western Siberia/Western Europe) 5.1% of the population 5 year peak mean 1991/92-1995/96 ▪ *Dunlin (Calidris alpina alpine)* (Northern Siberia/Europe/Western Africa) 2.4% of the population 5 year peak mean 1991/92-1995/96 ▪ Ringed Plover *(Charadrius hiaticula)* 0.7% of the population 5 year peak mean 1991/92-1995/96 ▪ Black-tailed Godwit *(Limosa limosa islandica)* (Iceland - breeding) 2% of the population 5 year peak mean 1991/92-1995/96 ▪ Grey Plover *Pluvialis squatarola* (Eastern Atlantic - wintering) 3% of the population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** **Over winter the area regularly supports:** ▪ 109964 waterfowl (5 year peak mean 01/04/1998) ▪ Including: *Branta bernicla bernicla , Charadrius hiaticula , Pluvialis squatarola , Calidris alpina alpina , Limosa limosa islandica .*

Site Name: Blackwater Estuary **Location (Lat & Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK9009245** **Size (ha): 4395.15** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features); **Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.** Subject to natural change, to maintain or restore: ▪ 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 populations of the qualifying features; ▪ The distribution of the qualifying features within the site.
Component SSSIs	▪ Blackwater Estuary SSSI
Vulnerabilities (includes existing pressures and trends)	**Coastal erosion** ▪ The main threat to the site is erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain. The situation is worsened with increasing winter storm events, whilst the hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland. This situation is starting to be addressed by alternative flood defence techniques. A shoreline management plan has been prepared for the Essex coast, which seeks to provide a blueprint for managing the coastline sustainably.

Site Name: Blackwater Estuary Location (Lat & Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK9009245 Size (ha): 4395.15 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	Nutrient enrichment ▪ Nutrient enrichment occurs from agricultural run-off and treated sewage effluent. This problem will be addressed through the Essex Estuaries candidate SAC scheme of management as well as review of discharge consents under the Habitats Regulations. **Water-based recreation** ▪ The control of motorised craft (with particular reference to jet-skis) is being addressed through the Blackwater Estuary Management Plan. Enforcement of speed limits should ensure that roosting birds are not subjected to disturbance and saltmarsh habitats are protected from damage by jet-skis. **Drought** ▪ The droughts over the last five years have resulted in lowered water tables in grazing marshes. Attempts are being made to restore this by pumping water from adjacent ditches and use of tertiary treated sewage effluent.

Site Name: Crouch and Roach Estuaries SPA **Location (Lat & Long):** **51 38 23 N** **00 43 06 E** **JNCC Site Code: UK9009244** **Size (ha): 1735.58** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	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 significant numbers of birds. The site is of importance for wintering waterbirds, especially Dark-bellied Brent Goose. The Crouch and Roach Estuary is an integral component of the phased Mid-Essex Coast SPA.
Qualifying Features	**Article 4.1 Qualification (79/409/EEC)** Over winter the area regularly supports: ▪ Hen Harrier (*Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987-1991 **Article 4.2 Qualification (79/409/EEC)** Over winter the area regularly supports: ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 1% of the population 5 year peak mean 1991/92-1995/96 (Western Siberia/Western Europe) **Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage Of Birds** Over winter the area regularly supports: ▪ 18607 waterfowl (5 year peak mean 30/06/1999) Including: Brent Goose (*Branta bernicla bernicla*)

Site Name: Crouch and Roach Estuaries SPA **Location (Lat & Long):** **51 38 23 N** **00 43 06 E** **JNCC Site Code: UK9009244** **Size (ha): 1735.58** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features); **Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.** Subject to natural change, to maintain or restore: ▪ 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 populations of the qualifying features; ▪ The distribution of the qualifying features within the site.
Component SSSIs	▪ Crouch and Roach Estuaries
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss and Fragmentation** ▪ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation. **Increased Water Pollution**

Site Name: Crouch and Roach Estuaries SPA Location (Lat & Long): 51 38 23 N 00 43 06 E JNCC Site Code: UK9009244 Size (ha): 1735.58 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources. **Physical Disturbance** ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ Visual presence (e.g. recreational activity). ▪ Some disturbance of feeding and roosting waterfowl is likely through recreational use of sea wall footpaths by dog walkers, bird watchers etc. **Biological Disturbance** ▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

Site Name: Dengie **Location Grid Ref (Lat & Long):** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK9009242** **Size: 3127.23** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Dengie is located on the coast of Essex in eastern England. It is a large and remote area of tidal mud-flats and saltmarshes at the eastern end of the Dengie peninsula, between the adjacent Blackwater and Crouch Estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It is of importance for wintering populations of Hen Harrier *Circus cyaneus*, wildfowl and waders.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Hen Harrier *(Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987-1991 **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Brant Goose (*Branta bernicla bernicla)* (Western Siberia/Western Europe) 0.8% of the population 5 year peak mean 1991/92-1995/96 ▪ Red Knot *(Calidris canutus)* (North-eastern Canada/Greenland/Iceland/Northwestern Europe) ▪ Grey Plover *Pluvialis squatarola* (Eastern Atlantic - wintering) 1.4% of the population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS**

Site Name: Dengie **Location Grid Ref (Lat & Long):** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK9009242** **Size: 3127.23** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Over winter the area regularly supports: ▪ 31454 waterfowl (5 year peak mean 01/04/1998) ▪ Including: *Branta bernicla bernicla, Pluvialis squatarola, Calidris canutus.*
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features); **Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.** Subject to natural change, to maintain or restore: ▪ 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 populations of the qualifying features; ▪ The distribution of the qualifying features within the site.
Component SSSIs	▪ Dengie SSSI
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss** ▪ The main threat to the site is erosion of intertidal habitats due to a combination of sea level rise and

Site Name: Dengie Location Grid Ref (Lat & Long): 51 41 26 N 00 57 34 E JNCC Site Code: UK9009242 Size: 3127.23 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	isostatic forces operating on the land mass of Great Britain. The situation is worsened with increasing winter storm events, whilst the hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland. This situation is starting to be addressed by alternative flood defence techniques. A shoreline management plan has been prepared for the Essex coast which seeks to provide a blueprint for managing the coastline sustainably. **Disturbance** ▪ The Thames Fishery is coming under increased pressure from boats that previously fished the Wash for cockles. Controls over the fishery have been put in place by Kent and Essex Sea Fisheries Committee. ▪ A management plan for English Nature details a policy of non-intervention to prevent damage to the site from human intervention. This and other management issues will be addressed through the European marine site management scheme.

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Foulness is located on the coast of Essex, on the east coast of England north of the mouth of the Thames estuary. The site is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mud-flats, cockle-shell banks and sand-flats. It includes one of the three largest continuous sand-silt flats in the UK. The diversity of high quality coastal habitats present support important populations of breeding, migratory and wintering waterbirds, notably very important concentrations of Dark-bellied Brent Goose *Branta bernicla bernicla.*
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** During the breeding season the area regularly supports: ▪ Avocet *(Recurvirostra avosetta)* up to 5.8% of the GB breeding population 5 year mean, 1987-1991 ▪ Little Tern *(Sterna albifrons)*at least 1% of the GB breeding population 5 year mean, 1992-1996 ▪ Common Tern *(Sterna hirundo)*up to 1.8% of the GB breeding population Count, as at 1996 ▪ Sandwich Tern *(Sandwich Tern)* up to 2.3% of the GB breeding population 5 year mean, 1992-1996 Over winter the area regularly supports: ▪ Hen Harrier *(Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987/8-1991/2 ▪ Bar-tailed Godwit *(Limosa lapponica)* 14.6% of the GB population 5 year peak mean 1991/92-1995/96 ▪ Avocet *(Recurvirostra avosetta)* 7.9% of the GB population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** During the breeding season the area regularly supports: ▪ Ringed Plover *(Charadrius hiaticula)* up to 1.6% of the population in Great Britain 5 year mean, 1987/8-

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	1991/2 Over winter the area regularly supports: ▪ Brant Goose *(Branta bernicla bernicla) 4.4% of the population 5 year peak mean 1991/92-1995/96* ▪ Red Knot (*Calidris canutus)* 11.7% of the population 5 year peak mean 1991/92-1995/96 ▪ Eurasian Oystercatcher *(Haematopus ostralegus)*1.3% of the population 5 year peak mean 1991/92-1995/96 ▪ Grey Plover *(Pluvialis squatarola)* 2.5% of the population 5 year peak mean 1991/92-1995/96 ▪ Common Redshank *(Tringa totanus)* 0.8% of the population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** Over winter the area regularly supports: ▪ 107999 waterfowl (5 year peak mean 01/04/1998) ▪ Including: Brant Goose *(Branta bernicla bernicla)* , Eurasian Oystercatcher *(Haematopus ostralegus),* Avocet *(Recurvirostra avosetta)* , Grey Plover *(Pluvialis squatarola)* , Red Knot *(Calidris Canutus)* , Bar-tailed Godwit *(Limosa lapponica)* , Common Redshank *(Tringa totanus)*.
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features); **Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.**

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Subject to natural change, to maintain or restore: ▪ 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 populations of the qualifying features; ▪ The distribution of the qualifying features within the site.
Component SSSIs	▪ Foulness SSSI
Vulnerabilities (includes existing pressures and trends)	Much of the area is owned by the Ministry of Defence and is not, therefore, subject to development pressures or public disturbance. **Habitat Loss and Fragmentation** ▪ Natural processes are adversely affecting the south-east coastline and saltmarshes are being eroded. ▪ Maintenance of the integrity of the intertidal and saltmarsh habitats of the Mid-Essex Coast Ramsar sites as a whole is being addressed by soft sea defence measures, managed retreat and foreshore recharge. ▪ The saltmarshes and mudflats are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation. **Disturbance** ▪ The cockel beds on the Maplin Sands support internationally important numbers of wading birds: the

Site Name: Foulness Location (Lat & Long): 51 34 26 N 00 55 17 E JNCC Site Code: UK9009246 Size (ha) : 10968.9 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	Kent and Essex Sea Fisheries Committee control the cockle fishery through regulatory orders. **Physical Disturbance** ▪ Lower levels of rainfall and changes in drainage for agriculture have led to aridification, although this is compensated for by the addition of sea water. ▪ Offshore aggregate dredging and seismic surveys could possibly adversely affect the Maplin sands, will be addressed through the Essex Estuaries marine Special Area of Conservation (SAC) management scheme, of which Foulness is part.

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 24 02 N** **00 40 38 E** **JNCC Site Code: UK9012031** **Size: 4684.36** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Medway Estuary feeds into and lies on the south side of the outer Thames Estuary in Kent, south-east England. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and Sheerness. It has a complex arrangement of tidal channels, which drain around large islands of saltmarsh and peninsulas of grazing marsh. The mud-flats are rich in invertebrates and also support beds of E*nteromorpha* and some Eelgrass *Zostera* spp. Small shell beaches occur, particularly in the outer part of the estuary. Grazing marshes are present inside the sea walls around the estuary. The complex and diverse mixes of coastal habitats support important numbers of waterbirds throughout the year. In summer, the estuary supports breeding waders and terns, whilst in winter it holds important numbers of geese, ducks, grebes and waders. The site is also of importance during spring and autumn migration periods, especially for waders.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **During the breeding season the area regularly supports:** ▪ Avocet *(Recurvirostra avosetta)* (Western Europe/Western Mediterranean - breeding) 6.2% of the GB breeding population 5 year mean, 1988-1992 ▪ Little Tern *(Sterna albifrons)* (Eastern Atlantic - breeding) *1.2% of the GB breeding population 5 year mean, 1991-1995* ▪ *Sterna hirundo* (Northern/Eastern Europe - breeding) 0.6% of the GB breeding population Count, as at 1994 **Over winter the area regularly supports:** ▪ Bewick's swan *(Cygnus columbianus bewickii)* (Western Siberia/North-eastern & North-western Europe) 0.2%

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK9012031 Size: 4684.36 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	of the GB population 5 year peak mean 1991/92-1995/96 ▪ *Avocet (Recurvirostra avosetta)* (Western Europe/Western Mediterranean - breeding) 24.7% of the GB population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Northern Pintail ***(****Anas acuta)* (North-western Europe) 1.2% of the population 5 year peak mean 1991/92-1995/96 ▪ Northern Shoveler *(Anas clypeata)* (North-western/Central Europe) 0.8% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Common Teal *(Anas crecca)* (North-western Europe) 1.3% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Eurasian Wigeon *(Anas Penelope)* (Western Siberia/North-western/North-eastern Europe) 1.6% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Ruddy Turnstone *(Arenaria interpres)* (Western Palearctic - wintering) 0.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Brant Goose *(Branta bernicla bernicla)* (Western Siberia/Western Europe) 1.1% of the population 5 year peak mean 1991/92-1995/96 ▪ Dunlin *(Calidris alpina alpine)* (Northern Siberia/Europe/Western Africa) 1.9% of the population 5 year peak mean 1991/92-1995/96 ▪ Red Knot *(Calidris canutus)* (North-eastern Canada/Greenland/Iceland/Northwestern Europe) 0.2% of the

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK9012031 Size: 4684.36 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	population 5 year peak mean 1991/92-1995/96 ▪ Ringed Plover *(Charadrius hiaticula)* (Europe/Northern Africa - wintering) 1.6% of the population 5 year peak mean 1991/92-1995/96 ▪ Eurasian Oystercatcher *(Haematopus ostralegus)* (Europe & Northern/Western Africa) 1% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Black-tailed Godwit *(Limosa limosa islandica)* (Iceland – breeding) 12.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Eurasian Curlew *(Numenius arquata)* (Europe - breeding) 1.7% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Grey Plover *(Pluvialis squatarola)* (Eastern Atlantic - wintering) 2% of the population 5 year peak mean 1991/92-1995/96 ▪ Common Shelduck *(Tadorna tadorna)* (North-western Europe) 1.5% of the population 5 year peak mean 1991/92-1995/96 ▪ Greenshank *(Tringa nebularia)* (Europe/Western Africa) 2.6% of the population in Great Britain No count period specified. ▪ Common Redshank *(Tringa totanus)* (Eastern Atlantic - wintering) 2.1% of the population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** **During the breeding season the area regularly supports:**

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E** **JNCC Site Code: UK9012031** **Size: 4684.36** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	▪ *Alcedo atthis, Anas platyrhynchos , Asio flammeus, Aythya ferina , Circus cyaneus, Falco columbarius, Gavia stellata , Phalacrocorax carbo , Vanellus vanellus .* **Over winter the area regularly supports:** ▪ 65496 waterfowl (5 year peak mean 01/04/1998) ▪ Including: *Gavia stellata , Podiceps cristatus , Phalacrocorax carbo , Cygnus columbianus bewickii , Branta bernicla bernicla , Tadorna tadorna , Anas penelope , Anas crecca , Anas platyrhynchos , Anas acuta , Anas clypeata , Aythya ferina , Haematopus ostralegus , Recurvirostra avosetta , Charadrius hiaticula , Pluvialis squatarola , Vanellus vanellus , Calidris canutus , Calidris alpina alpina , Limosa limosa islandica , Numenius arquata , Tringa totanus , Tringa nebularia , Arenaria interpres.*
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features); **Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.** Subject to natural change, to maintain or restore: ▪ 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;

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK9012031 Size: 4684.36 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ The populations of the qualifying features; ▪ The distribution of the qualifying features within the site.
Component SSSIs	▪ Medway and Estuary Marshes SSSI
Vulnerabilities (includes existing pressures and trends)	**Habitat fragmentation/Loss** ▪ There is evidence of rapid erosion of intertidal habitat within the site due to natural processes. Research on mudflat recharge using dredging spoil is being investigated as a means of countering the erosion. ▪ Also a threat of erosion from the effects of sea defences development and clay extraction **Physical Disturbance** ▪ The intertidal area is vulnerable to disturbance from water borne recreation. This is being addressed as part of an estuary management plan. ▪ Pressures from proposed transport and industrial developments are being addressed through the planning system and under the provisions of the Habitat Regulations. ▪ The effects of abstraction on the availability of water through abstraction for other land uses and drainage for arable cultivation will be addressed through the consent review process under the Habitats Regulations. ▪ The terrestrial ecosystem is reliant on grazing practices and water management and changes to these may pose a threat.

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E** **JNCC Site Code: UK9012021** **Size: 4838.94** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Thames Estuary and Marshes SPA is located on the south side of the Thames Estuary in southern England. The marshes extend for about 15 km along the south side of the estuary and also include intertidal areas on the north side of the estuary. To the south of the river, much of the area is brackish grazing marsh, although some of this has been converted to arable use. At Cliffe, there are flooded clay and chalk pits, some of which have been infilled with dredgings. Outside the sea wall, there is a small extent of saltmarsh and broad intertidal mud-flats. The estuary and adjacent grazing marsh areas support an important assemblage of wintering waterbirds including grebes, geese, ducks and waders. The site is also important in spring and autumn migration periods.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Hen Harrier *(Circus cyaneus)* 1% of the population in Great Britain Five year peak mean for 1993/94 to 1997/98 ▪ Avocet *(Recurvirostra avosetta)* (Western Europe/Western Mediterranean - breeding) **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Dunlin *(Calidris alpina alpina)* (Northern Siberia/Europe/Western Africa) 2.1% of the population Five year peak mean for 1993/94 to 1997/98 ▪ Red Knot *(Calidris canutus)* (North-eastern Canada/Greenland/Iceland/Northwestern Europe) 1.4% of the

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E** **JNCC Site Code: UK9012021** **Size: 4838.94** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	population Five year peak mean for 1993/94 to 1997/98 ▪ Black-tailed Godwit *(Limosa limosa islandica)* (Iceland - breeding) 2.4% of the population Five year peak mean for 1993/94 to 1997/98 ▪ Grey Plover *(Pluvialis squatarola)* (Eastern Atlantic - wintering) 1.7% of the population Five year peak mean for 1993/94 to 1997/98 ▪ Common Redshank *(Tringa totanus)* (Eastern Atlantic - wintering) 2.2% of the population Five year peak mean for 1993/94 to 1997/98 **On passage the area regularly supports:** ▪ Ringed Plover *(Charadrius hiaticula)* (Europe/Northern Africa - wintering) 2.6% of the population Five year peak mean for 1993/94 to 1997/98 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** **Over winter the area regularly supports:** ▪ 75019 waterfowl (5 year peak mean 21/03/2000) ▪ Including: *Recurvirostra avosetta , Pluvialis squatarola , Calidris canutus , Calidris alpina alpina , Limosa limosa islandica , Tringa totanus* .
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features); **Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the**

Site Name: Thames Estuary & Marshes Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E JNCC Site Code: UK9012021 Size: 4838.94 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: ▪ 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 populations of the qualifying features; ▪ The distribution of the qualifying features within the site.
Component SSSIs	▪ South Thames Estuary And Marshes SSSI ▪ Medway Estuary & Marshes SSSI ▪ Foulness SSSI ▪ Benfleet & Southend Marshes SSSI ▪ Mucking Flats and Marshes SSSI
Vulnerabilities (includes existing pressures and trends)	**Habitat fragmentation/ loss** ▪ There is evidence of coastal squeeze and erosion of intertidal habitat within the site. English Nature is in discussion with the port authority on the role of port dredging in intertidal habitat loss. ▪ The terrestrial part of the site depends on appropriate grazing and management of water. The availability of livestock may be affected by changes in agricultural markets. Evidence suggests that the water supply to grazing marsh has decreased. A water level management plan may address this.

Site Name: Thames Estuary & Marshes Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E JNCC Site Code: UK9012021 Size: 4838.94 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	Disturbance ▪ The intertidal area is also vulnerable to disturbance from water borne recreation. This is being addressed by information dissemination as part of an estuary management plan. ▪ Development pressure can lead to both direct landtake from the site and indirect disturbance and hydrological effects. These effects will be addressed through the Habitats Regulations 1994. **Water Pollution** ▪ Studies by the Environment Agency indicate that the waters in the Thames estuary are hyper-nutrified for nitrogen and phosphorus.

Ramsar Sites

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Benfleet and Southend Marshes are located on the north shore of the outer Thames Estuary in southern England. The site comprises an extensive series of saltmarshes, cockle shell banks, mud-flats, and grassland that supports a diverse flora and fauna. The productive mud-flats, cockle shell banks and diverse saltmarsh communities provide a wide range of feeding and roosting opportunities for internationally important numbers of wintering wildfowl and waders.
Qualifying Features	**Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 32867 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 spring/autumn:** ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 4532 individuals, representing an average of 2.1% of the population (5 year peak mean 1998/9-2002/3)

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Species with peak counts in winter: ▪ Grey plover (*Pluvialis squatarola*) E Atlantic/W Africa - wintering 1710 individuals, representing an average of 3.2% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Red knot (*Calidris canutus islandica*) W & Southern Africa (wintering) 6307 individuals, representing an average of 1.4% 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:** ▪ Dunlin (*Calidris alpina alpine*) W Siberia/W Europe 17591 individuals, representing an average of 1.3% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	▪ None available, however, please refer to the conservation objectives for the Benfleet and Southend Marshes SPA.
Component SSSIs	▪ Beenfleet and Southend Marshes
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss and Fragmentation** ▪ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation.

Site Name: Benfleet and Southend Marshes Location (Lat & Long): 51 31 42 N 00 41 00 E JNCC Site Code: UK11006 Size (ha): 2251.31 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	Increased Water Pollution ▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources. **Physical Disturbance** ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ The SPA Natura 2000 data form states that recreational activity is not a problem, however infrastructure works to facilitate visitor attractions are leading to piecemeal development which is dealt with under the planning control provisions of the Habitat Regulations. ▪ The information sheet for the Ramsar identifies **Biological Disturbance** ▪ Introduction of microbial pathogens.

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

Site Name: Blackwater Estuary **Location (Lat and Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK11007** **Size: 4395.15** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	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. 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.
Qualifying Features	**Ramsar criterion 1** Qualifies by virtue of the extent and diversity of saltmarsh habitat present. This site, and the four others in the

Site Name: Blackwater Estuary Location (Lat and Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK11007 Size: 4395.15 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	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):**

Site Name: Blackwater Estuary **Location (Lat and Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK11007** **Size: 4395.15** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Species with peak counts in winter: ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 8689 individuals, representing an average of 4% of the population (5 year peak mean 1998/9- 2002/3) ▪ Grey plover (*Pluvialis squatarola*) 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 (*Calidris alpina alpine)* 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 (*Limosa limosa islandica)* 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 (*Tadorna tadorna)* NW 3141 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)Europe ▪ European golden plover (*Pluvialis apricaria apricaria)* P. a. altifrons Iceland & Faroes/E 16083 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)Atlantic ▪ Common redshank (*Tringa totanus totanus)* 4169 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	▪ None available, however, please refer to the conservation objectives for the Blackwater Estuary SPA and SAC.
Component SSSIs	▪ Blackwater Estuary SSSI

Site Name: Blackwater Estuary **Location (Lat and Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK11007** **Size: 4395.15** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Blackwater Estuary SSSI
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss** ▪ Erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain. ▪ The situation is worsened with increasing winter storm events, ▪ Hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland. **Nutrient enrichment** ▪ Arable agriculture surrounds the coastal wetland and runoff from fields enters the site, leading to nutrient enrichment. This problem will be addressed through the Essex Estuaries candidate SAC scheme of management as well as review of discharge consents under the Habitats Regulations. **Disturbance** ▪ Disturbance through recreational activities is being minimised through restrictions on jet ski use. **Drought** ▪ The droughts over the last five years have resulted in lowered water tables in grazing marshes leading to aridification. Water is being added from alternative sources to raise the water table.

Site Name: Crouch and Roach Estuaries **Location (Lat & Long):** **51 38 16 N** **00 40 10 E** **JNCC Site Code: UK11058** **Size (ha): 1735.58** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Rivers Crouch and Roach are situated in South Essex. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of 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 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 birds. One species is present in internationally important numbers, and three other species of wader and wildfowl occur in nationally important numbers. Additional interest is provided by the aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants.
Qualifying Features	**Ramsar criterion 2** Supports an appreciable assemblage of rare, vulnerable or endangered species or subspecies of plant and animal including 13 nationally scarce plant species: slender hare's ear *Bupleurum tenuissimum*, divided sedge *Carex divisa*, sea barley *Hordeum marinum*, golden-samphire *Inula crithmoides*, laxflowered 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 seablite *Suaeda vera* and sea clover *Trifolium squamosum*. Several important invertebrate species are also present on the site, including scarce emerald damselfly *Lestes dryas*, the shorefly *Parydroptera discomyzina*, the rare soldier fly *Stratiomys singularior*, the large horsefly *Hybomitra expollicata*, the beetles *Graptodytes bilineatus* and *Malachius vulneratus*, the ground lackey moth *Malacosoma castrensis* and *Eucosoma catoprana*. **Ramsar criterion 5**

Site Name: Crouch and Roach Estuaries **Location (Lat & Long):** **51 38 16 N** **00 40 10 E** **JNCC Site Code: UK11058** **Size (ha): 1735.58** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Assemblages of international importance: **Species with peak counts in winter:** ▪ 16970 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 (*Branta bernicla bernicla*) 2103 individuals, representing an average of 2.1% of the GB population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	▪ None available, however, please refer to the conservation objectives for the Crouch and Roach Estuaries SPA.
Component SSSIs	▪ Crouch and Roach Estuaries
SAC Condition Assessment	No condition assessment is currently available for the Crouch and Roach Estuaries Ramsar site, therefore, the condition status of the component SSSI is provided below.
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss and Fragmentation** ▪ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise.

Site Name: Crouch and Roach Estuaries Location (Lat & Long): 51 38 16 N 00 40 10 E JNCC Site Code: UK11058 Size (ha): 1735.58 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	▪ Smothering by sediments driven by storm tides and siltation. **Increased Water Pollution** ▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources. **Physical Disturbance** ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ Visual presence (e.g. recreational activity). ▪ Some disturbance of feeding and roosting waterfowl is likely through recreational use of sea wall footpaths by dog walkers, bird watchers etc. **Biological Disturbance** ▪ Introduction of microbial pathogens.

Site Name: Crouch and Roach Estuaries **Location (Lat & Long):** **51 38 16 N** **00 40 10 E** **JNCC Site Code: UK11058** **Size (ha): 1735.58** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

Site Name: Dengie **Location Grid Ref:** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK11018** **Size: 3127.23** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Dengie is a large and remote area of tidal mudflat and saltmarsh at the eastern end of the Dengie Peninsula, between the Blackwater and Crouch Estuaries in Essex. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It hosts internationally and nationally important wintering populations of wildfowl and waders, and in summer supports a range of breeding coastal birds including rarities. The formation of cockleshell spits and beaches is of geomorphological interest.
Qualifying Features	**Ramsar criterion 1** ▪ Qualifies by virtue of the extent and diversity of saltmarsh habitat present. Dengie, and the four other sites in the Mid-Essex Coast Ramsar site 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.

Site Name: Dengie **Location Grid Ref:** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK11018** **Size: 3127.23** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Ramsar criterion 2 ▪ Dengie supports a number of rare plant and animal species. The Dengie has 11 species of nationally scarce plants: sea kale *Crambe maritima*, sea barley *Hordeum marinum*, golden samphire *Inula crithmoides*, lax flowered sea lavender *Limonium humile*, the glassworts *Sarcocornia perennis* and *Salicornia pusilla*, small cord-grass *Spartina maritima*, shrubby sea-blite *Suaeda vera*, and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltei*. The invertebrate fauna includes the following Red Data Book species: a weevil *Baris scolopacea*, a horsefly *Atylotus latistriatus* and a jumping spider *Euophrys browningi*. **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:** ▪ 43828 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:**

Site Name: Dengie **Location Grid Ref:** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK11018** **Size: 3127.23** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 2000 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Grey plover (*Pluvialis squatarola*) E Atlantic/W Africa – wintering 4582 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3) ▪ Red knot (*Calidris canutus islandica*) W & Southern Africa1998/9-2002/3) 14528 individuals, representing an average of 3.2% 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:** ▪ Bar-tailed godwit (*Limosa lapponica lapponica*) W Palearctic 2593 individuals, representing an average of 2.1% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	None available, however, please refer to the conservation objectives for the Dengie SPA
Component SSSIs	▪ Dengie SSSI
Vulnerabilities (includes existing pressures and trends)	**Habitat Fragmentation/Loss** ▪ The main threat to the site is erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain. ▪ The situation is worsened with increasing winter storm events. ▪ Hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland, leading to a loss of habitats.

Site Name: Dengie Location Grid Ref: 51 41 26 N 00 57 34 E JNCC Site Code: UK11018 Size: 3127.23 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	▪ This situation is starting to be addressed by alternative flood defence techniques. A shoreline management plan has been prepared for the Essex coast which seeks to provide a blueprint for managing the coastline sustainably. **Disturbance** ▪ Increased pressure from boats that previously fished the Wash for cockles. Controls over the fishery have been put in place by Kent and Essex Sea Fisheries Committee. ▪ A management plan for English Nature details a policy of non-intervention to prevent damage to the site from human intervention. This and other management issues will be addressed through the European marine site management scheme. ▪ Bradwell Power Station has a visitor centre that uses the Dengie for guided tours. This could lead to increased recreational pressure.

Site Name: Foulness **Location Grid Ref:** **51 34 25 N** **00 55 17 E** **JNCC Site Code: UK11026** **Size (ha): 10932.95** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Foulness is located on the coast of Essex, on the east coast of England north of the mouth of the Thames estuary. The site is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mudflats and sandflats which support nationally rare and nationally scarce plants, and nationally and internationally important populations of breeding, migratory and wintering waterfowl. Foulness Ramsar includes one of the three largest continuous sand-silt flats in the UK.
Qualifying Features	**Ramsar criterion 1** This site qualifies by virtue of the extent and diversity of saltmarsh habitat present. This and four other sites in the Mid-Essex Coast Ramsar site complex, include 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 site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates. **Ramsar criterion 3** The site contains extensive saltmarsh habitat, with areas supporting 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:** ▪ 82148 waterfowl (5 year peak mean 1998/99-2002/2003)

Site Name: Foulness **Location Grid Ref:** **51 34 25 N** **00 55 17 E** **JNCC Site Code: UK11026** **Size (ha): 10932.95** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Ramsar criterion 6 – species/populations occurring at levels of international importance. **Qualifying Species/populations (as identified at designation):** **Species with peak counts in spring/autumn:** ▪ Common redshank (*Tringa totanus totanus) 2586 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)* **Species with peak counts in winter:** ▪ Dark-bellied brent goose (*Branta bernicla bernicla) 6475 individuals, representing an average of 3% of the population (5 year peak mean 1998/9- 2002/3)* ▪ Eurasian oystercatcher (*Haematopus ostralegus ostralegus)* Europe & NW Africa –wintering 14674 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3) ▪ Grey plover *(Pluvialis squatarola)* E Atlantic/W Africa -wintering 4343 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3) ▪ Red knot *(Calidris canutus islandica)* W & Southern Africa (wintering) 22439 individuals, representing an average of 4.9% of the population (5 year peak mean 1998/9-2002/3) ▪ Bar-tailed godwit *(Limosa lapponica lapponica)* W Palearctic 4095 individuals, representing an average of 3.4% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	None available, however, please refer to the conservation objectives for the Foulness SPA.
Component SSSIs	▪ Foulness

Site Name: Foulness **Location Grid Ref:** **51 34 25 N** **00 55 17 E** **JNCC Site Code: UK11026** **Size (ha): 10932.95** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Vulnerabilities (includes existing pressures and trends)	Much of the area is owned by the Ministry of Defence and is not, therefore, subject to development pressures or public disturbance. **Habitat Loss and Fragmentation** ▪ Natural processes are adversely affecting the south-east coastline and saltmarshes are being eroded. ▪ Maintenance of the integrity of the intertidal and saltmarsh habitats of the Mid-Essex Coast Ramsar sites as a whole is being addressed by soft sea defence measures, managed retreat and foreshore recharge. ▪ The saltmarshes and mudflats are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation. **Disturbance** ▪ The cockel beds on the Maplin Sands support internationally important numbers of wading birds: the Kent and Essex Sea Fisheries Committee control the cockle fishery through regulatory orders. **Physical Disturbance** ▪ Lower levels of rainfall and changes in drainage for agriculture have led to aridification, although this is compensated for by the addition of sea water. ▪ Offshore aggregate dredging and seismic surveys could possibly adversely affect the Maplin sands, will be addressed through the Essex Estuaries marine Special Area of Conservation (SAC) management scheme, of which Foulness is part.

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 24 02 N** **00 40 38 E** **JNCC Site Code: UK11040** **Size: 4684.36** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Medway Estuary and Marshes is located on the north coast of Kent, within the Greater Thames estuary. It is a complex of rain-fed, brackish, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.
Qualifying Features	**Ramsar criterion 2** ▪ The site supports a number of species of rare plants and animals. The site holds several nationally scarce plants, including sea barley *Hordeum marinum*, curved hard-grass *Parapholis incurva*, annual beard-grass *Polypogon monspeliensis*, Borrer's saltmarsh-grass *Puccinellia fasciculata*, slender hare`s-ear *Bupleurum tenuissimum*, sea clover *Trifolium squamosum*, saltmarsh goose-foot *Chenopodium chenopodioides*, golden samphire *Inula crithmoides*, perennial glasswort *Sarcocornia perennis* and one-flowered glasswort *Salicornia pusilla*. ▪ A total of at least twelve British Red Data Book species of wetland invertebrates have been recorded on the site. These include a ground beetle *Polistichus connexus*, a fly *Cephalops perspicuus*, a dancefly *Poecilobothrus ducalis*, a fly *Anagnota collini*, a weevil *Baris scolopacea*, a water beetle *Berosus spinosus*, a beetle *Malachius vulneratus*, a rove beetle *Philonthus punctus*, the ground lackey moth *Malacosoma castrensis*, a horsefly *Atylotus latistriatuus*, a fly *Campsicnemus magius*, a solider beetle, *Cantharis fusca*, and a cranefly *Limonia danica*. A significant number of non-wetland British Red Data Book species also occur. **Ramsar criterion 5**

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK11040 Size: 4684.36 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	Assemblages of international importance: **Species with peak counts in winter:** ▪ 47637 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 spring/autumn:** ▪ Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa – wintering 3103 individuals, representing an average of 1.2% of the population (5 year peak mean 1998/9-2002/3) ▪ Common redshank (*Tringa totanus totanus)* 3709 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3) **Species with peak counts in winter:** ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 2575 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3) ▪ Common shelduck (*Tadorna tadorna*) NW Europe 2627 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Northern pintail (*Anas acuta)* NW Europe 1118 individuals, representing an average of 1.8% of the

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E** **JNCC Site Code: UK11040** **Size: 4684.36** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	population (5 year peak mean 1998/9-2002/3) ▪ Ringed plover (*Charadrius hiaticula*) Europe/Northwest Africa 540 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Red knot (*Calidris canutus islandica)* W & Southern Africa (wintering) 3021 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Dunlin , *Calidris alpina alpina*, W Siberia/W Europe 8263 individuals, representing an average of 1.4% of the GB 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 spring/autumn:** Black-tailed godwit (*Limosa limosa islandica)* Iceland/W Europe 721 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar). **Habitat Types represented (Biodiversity Action Plan categories)** ▪ Improved Grassland ▪ Fen, Marsh and Swamp ▪ Littoral Sediment

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E** **JNCC Site Code: UK11040** **Size: 4684.36** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Coastal Lagoon **Geological features (Geological SiteTypes)** N/A (*) or restored to favourable condition if features are judged to be unfavourable.
Component SSSIs	▪ Medway and Estuary Marshes SSSI
Vulnerabilities (includes existing pressures and trends)	**Habitat fragmentation/Loss** ▪ There is evidence of rapid erosion of intertidal habitat within the site due to natural processes. Research on mudflat recharge using dredging spoil is being investigated as a means of countering the erosion. ▪ Also a threat of erosion from the effects of sea defences development and clay extraction **Physical Disturbance** ▪ The intertidal area is vulnerable to disturbance from water borne recreation. This is being addressed as part of an estuary management plan. ▪ Pressures from proposed transport and industrial developments are being addressed through the planning system and under the provisions of the Habitat Regulations. ▪ The effects of abstraction on the availability of water through abstraction for other land uses and drainage for arable cultivation will be addressed through the consent review process under the Habitats Regulations. ▪ The terrestrial ecosystem is reliant on grazing practices and water management and changes to these may pose a threat.

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 29 08 N** **00 35 47 E** **JNCC Site Code: UK11069** **Size: 4838.94** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Thames Estuary and Marshes straddles the Thames Estuary containing part of the north coast of Kent and part of the southern coast of Essex. The site is a complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.
Qualifying Features	**Ramsar criterion 2** ▪ The site supports one endangered plant species and at least 14 nationally scarce plants of wetland habitats. The site also supports more than 20 British Red Data Book invertebrates. **Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 45118 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 spring/autumn:**

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 29 08 N** **00 35 47 E** **JNCC Site Code: UK11069** **Size: 4838.94** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Ringed plover (*Charadrius hiaticula*) Europe/Northwest Africa 595 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Black-tailed godwit (*Limosa limosa islandica)* Iceland/W Europe 1640 individuals, representing an average of 4.6% of the population (5 year peak mean 1998/9-2002/3) **Species with peak counts in winter:** ▪ Grey plover (*Pluvialis squatarola)* E Atlantic/W Africa –wintering 1643 individuals, representing an average of 3.1% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Red knot (*Calidris canutus islandica)* W & Southern Africa (wintering) 7279 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3) ▪ Dunlin (*Calidris alpina alpine)* W Siberia/W Europe 15171 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3) ▪ Common redshank (*Tringa totanus totanus)* 1178 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9- 2002/3)
Conservation Objectives	None available, however, please refer to the conservation objectives for the Thames Estuary & Marshes SPA
Component SSSIs	▪ South Thames Estuary And Marshes SSSI ▪ Medway Estuary & Marshes SSSI ▪ Foulness SSSI ▪ Benfleet & Southend Marshes SSSI ▪ Mucking Flats and Marshes SSSI

Site Name: Thames Estuary & Marshes Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E JNCC Site Code: UK11069 Size: 4838.94 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
Vulnerabilities (includes existing pressures and trends)	**Habitat fragmentation/ loss** ▪ There is evidence of coastal squeeze and erosion of intertidal habitat within the site. English Nature is in discussion with the port authority on the role of port dredging in intertidal habitat loss. ▪ The terrestrial part of the site depends on appropriate grazing and management of water. The availability of livestock may be affected by changes in agricultural markets. Evidence suggests that the water supply to grazing marsh has decreased. A water level management plan may address this. **Disturbance** ▪ The intertidal area is also vulnerable to disturbance from water borne recreation. This is being addressed by information dissemination as part of an estuary management plan. ▪ Development pressure can lead to both direct landtake from the site and indirect disturbance and hydrological effects. These effects will be addressed through the Habitats Regulations 1994. **Water Pollution** ▪ Studies by the Environment Agency indicate that the waters in the Thames estuary are hyper-nutrified for nitrogen and phosphorus.