

Appendix 1: European Site Characteristics

Site Name	Status & Site Code	Site Characteristics	Site Vulnerabilities	Primary Reason for Designation (Habitats and/or Species) Site Conservation Objectives
THAMES ESTUARY & MARSHES Unitary Authorities: Kent, Essex Area Ramsar (ha): 5588.59 Area SPA (ha): 4838.94	Ramsar Site – UK11069 SPA – UK9012021	Tidal rivers, estuaries, mud flats, sand flats, lagoons – 57.3% Salt marshes, salt pastures, salt steppes – 1.5% Shingle, sea cliffs, islets – 0.9% Inland water bodies (standing water, running water) – 5.6% Bogs, marshes, water fringed vegetation, fens – 3.7% Dry grassland, steppes – 1.9% Humid grassland,	There is evidence of erosion of the saltmarsh due to coastal squeeze ¹ (<i>rising sea levels causing intertidal habitats to migrate landwards, however in built up areas landward retreat is not possible due to presence of a sea wall or flood defences. In addition development usually takes place immediately behind such defences so the wall cannot be moved landwards to accommodate the managed retreat of vulnerable sites</i>) and erosion of intertidal habitats within the site. Erosion of the salt marsh a contributory factor in coastal squeeze at this site. Terrestrial part of site is dependant on grazing and water management, which may be affected by the agricultural market and development pressures. Development pressures may lead to indirect hydrological effects and direct land take from the site. However	Ramsar Site Criterion Criterion 2: Site supports one endangered plant species (<i>Lactuca saligna</i>) and at least 14 nationally scarce plants of wetland habitats. Site also supports 20 British Red Data Book invertebrates. Criterion 5: Assemblages of international importance – species with peak counts in winter, 75019 waterfowl. Criterion 6: Species/populations occurring at levels of international importance. <ul style="list-style-type: none"> - Ringer plover (<i>Charadrius hiaticula</i>) 2.6% of the GB population - Black tailed Godwit (<i>Limosa limosa islandica</i>) 2.6% of the GB population - Grey plover (<i>Pluvialis squatarola</i>) 1.7% of the GB population

¹ Pers comm. Natural England 29 May 2007.

² Pers comm. Natural England 29 May 2007.

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		mesophile grassland – 29.1%	<p>development should not lead to a net loss of grazing marsh habitat as it is an important habitat for SPA species.</p> <p>Studies indicate the waters in the Thames are hyper-nitrified for nitrogen and phosphorus and further studies are necessary to identify if this is having an adverse effect on the integrity of the site.</p> <p>The site is at risk from incidental pollution due to probable increase in shipping as a result of investment and port development.</p> <p>There is a further possible threat from an increase in the level of effluent due to development.</p> <p>The grazing marsh habitat is an important habitat for SPA species.</p> <p>Any future capital dredging may cause some issues, but maintenance dredging doesn't usually have an impact. ²</p>	<ul style="list-style-type: none"> - Red knot (<i>Calidris canutus</i>) 1.4% of the population - Common redshank (<i>Tringa tetanus</i>) 2.2% of the GB population - Avocet (<i>Recurvirostra avosetta</i>) 28.3% of the GB population - Hen Harrier (<i>Circus cyaneus</i>) 1.0% of the GB population <p>SPA</p> <p>Over winter the area regularly supports (Article 4.1):</p> <ul style="list-style-type: none"> - <i>Circus cyaneus</i> 1% of the population in GB - <i>Recurvirostra avosetta</i> 28.3% of the population in GB <p>Over winter the area regularly supports (Article 4.2):</p> <ul style="list-style-type: none"> - <i>Calidris alpine alpine</i> 2.1% of the population - <i>Calidris canutus</i> 1.4% of the population - <i>Limosa limosa islandica</i> 2.4% of the population - <i>Pluvialis squatarola</i> 1.7% of the population - <i>Tringa tetanus</i> 2.2% of the population

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				<p>On passage the area regularly supports:</p> <ul style="list-style-type: none"> - <i>Charadrius hiaticula</i> 2.6% of the population <p>Article 4.2 Qualification: An internationally important assemblage of birds: Over winter the area regularly supports 75019 waterfowl including <i>Recurvirostra avosetta</i> , <i>Pluvialis squatarola</i> , <i>Calidris canutus</i> , <i>Calidris alpina alpina</i> , <i>Limosa limosa islandica</i></p> <p>Conservation Objectives</p> <p>Subject to natural change, to maintain_ in favourable condition the habitats of the populations of Annex 1 species and migratory species that contribute to internationally important levels of the Thames Estuary and Marshes SPA, and the habitats of the waterfowl that contribute to the waterfowl assemblage of the Thames Estuary and Marshes SPA, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats ■ saltmarsh ■ intertidal shingle ■ grazing marsh ■ saline lagoons ■ flooded chalk pits

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<p>NORTH DOWNS WOODLAND</p> <p>Unitary Authorities: Kent, Medway</p> <p>Area (ha): 287.58</p>	<p>SAC – UK0030225</p>	<p>Dry grassland, steppes – 14%</p> <p>Broad-leaved deciduous woodland – 63%</p> <p>Coniferous woodland – 23%</p>	<p>The chalk grassland requires continuous grazing, which is not achieved over parts of this site. This may be affected by the agricultural market and development pressures.</p> <p>There are increased recreational pressures due to development.</p> <p>It is also not possible to rule out adverse effects to the site due to urbanisation from ongoing development.</p>	<p>SAC</p> <p>Annex 1 Habitats primary reason for selection:</p> <ul style="list-style-type: none"> - <i>Asperulo-Fagetum</i> beech forests - <i>Taxus baccata</i> woods of the British Isles <p>Annex II habitats qualifying feature for selection:</p> <ul style="list-style-type: none"> - Semi-dry natural grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)

<p>MEDWAY ESTUARY & MARSHES</p> <p>Unitary Authorities: Kent</p> <p>Area Ramsar (ha): 4969.74</p> <p>Area SPA (ha): 4684.36</p>	<p>Ramsar site – 11040</p> <p>SPA - 9012031</p>	<p>Tidal rivers, estuaries, mud flats, sand flats, lagoons – 67%</p> <p>Salt marshes, salt pastures, salt steppes – 15%</p> <p>Inland water bodies (standing water, running water) – 1%</p> <p>Bogs, marshes, water fringed vegetation, fens – 1%</p> <p>Dry grassland, steppes – 1%</p> <p>Humid grassland, mesophile grassland – 15%</p>	<p>Continued maintenance dredging for port may be contributing to the removal of sediment from the estuary and other adverse effects.</p> <p>Possible disturbance to site from water borne recreation and this pressure may increase due to development.</p> <p>Studies indicate the waters in the Thames are hyper-nitrified for nitrogen and phosphorus and further studies are necessary to identify if this is having an adverse effect on the integrity of the site. However in terms of algal growth, light levels prevent algae from growing year round.³</p> <p>Review necessary to address the effects of abstraction on the availability of water for drainage for arable cultivation and other land uses.</p> <p>Terrestrial part of site is dependant on grazing and water management, which may be affected by the agricultural market and development pressures.</p> <p>Development, transport and industrial, pressures may lead to indirect</p>	<p>Ramsar Site Criterion</p> <p>Criterion 2: Site supports number of rare plant and animal species</p> <ul style="list-style-type: none"> - <i>Hordeum marinum</i> sea barley - <i>Parapholis incurve</i> curved hard-grass - <i>Polypogon monspeliensis</i> annual beard-grass - <i>Puccinellia fasciculata</i> Borrer's saltmarsh-grass - <i>Bupleurum tenuissimum</i> slender hare`s-ear - <i>Trifolium squamosum</i> sea clover - <i>Chenopodium chenopodioides</i> saltmarsh goose-foot - <i>Inula crithmoides</i> golden samphire - <i>Sarcocornia perennis</i> perennial glasswort - <i>Salicornia pusilla</i> one-flowered glasswort - <p>Total of at least twelve British Red Data Book species of wetland invertebrates have been recorded on the site.</p> <p>Criterion 5: Assemblages of international importance – species with peak count in winter 47637 waterfowl</p>
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³ Pers comm. Natural England 29 May 2007.

⁴ Ibid.

			<p>hydrological effects and direct land take from the site. There was a loss of habitat due to the A249 bridge project, but this was compensated for by the Highways Agency.⁴</p> <p>The site is at risk from incidental pollution due to probable increase in shipping as a result of investment and port development.</p> <p>There is a further possible threat from an increase in the level of effluent due to development.</p> <p>The grazing marsh habitat is an important habitat for SPA species.</p>	<p>Criterion 6: Species/populations occurring at levels of international importance</p> <ul style="list-style-type: none"> - Grey plover (<i>Pluvialis squatarola</i>) 1.2% of the population - Common redshank (<i>Tringa totanus totanus</i>) 1.4% of the population - Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 1.1% of the population - Common shelduck (<i>Tadorna tadorna</i>) 3.3% of the GB population - Northern pintail (<i>Anas acuta</i>) 1.8% of the population - Ringed plover (<i>Charadrius hiaticula</i>) 1.6% of the GB population - Red knot (<i>Calidris canutus islandica</i>) 1% of the population - Dunlin (<i>Calidris alpina alpina</i>) 1.4% of the GB population <p>SPA</p> <p>During the breeding season the area regularly supports (Article 4.1):</p> <ul style="list-style-type: none"> - <i>Recurvirostra avosetta</i> 6.2% of the GB breeding population - <i>Sterna albifrons</i> 1.2% of the GB breeding population - <i>Sterna hirundo</i> 0.6% of the GB breeding population <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> - <i>Cygnus columbianus bewickii</i> 0.2% of the GB population
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				<ul style="list-style-type: none"> - <i>Recurvirostra avosetta</i> 24.7% of the GB population <p>Over winter the area regularly supports (Article 4.1):</p> <ul style="list-style-type: none"> - <i>Anas acuta</i> 1.2% of the population - <i>Anas clypeata</i> 0.8% of the population in GB - <i>Anas crecca</i> 1.3% of the population in GB - <i>Anas Penelope</i> 1.6% of the population in GB - <i>Arenaria interpres</i> 0.9% of the population in GB - <i>Branta bernicla bernicla</i> 1.1% of the population - <i>Calidris alpine alpine</i> 1.9% of the population - <i>Calidric canutus</i> 0.2% of the population - <i>Charadrius hiaticula</i> 1.6% of the population - <i>Haematopus ostralegus</i> 1% of the population in GB - <i>Limosa limosa islandica</i> 12.9% of the population in GB - <i>Numenius arquata</i> 1.7% of the population in GB - <i>Pluvialis squatarola</i> 2% of the population - <i>Tadorna tadorna</i> 1.5% of the population - <i>Tringa nebularia</i> 2.6% of the population in GB - <i>Tringa tetanus</i> 2.1% of the population
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				<p>Article 4.2 Qualification: An internationally important assemblage of birds: During the breeding season the area regularly supports <i>Alcedo atthis</i>, <i>Anas platyrhynchos</i>, <i>Asio flammeus</i>, <i>Aythya ferina</i>, <i>Circus cyaneus</i>, <i>Falco columbarius</i>, <i>Gavia stellata</i>, <i>Phalacrocorax carbo</i>, <i>Vanellus vanellus</i>.</p> <p>Over winter the area regularly supports 65496 waterfowl including: <i>Gavia stellata</i>, <i>Podiceps cristatus</i>, <i>Phalacrocorax carbo</i>, <i>Cygnus columbianus bewickii</i>, <i>Branta bernicla bernicla</i>, <i>Tadorna tadorna</i>, <i>Anas penelope</i>, <i>Anas crecca</i>, <i>Anas platyrhynchos</i>, <i>Anas acuta</i>, <i>Anas clypeata</i>, <i>Aythya ferina</i>, <i>Haematopus ostralegus</i>, <i>Recurvirostra avosetta</i>, <i>Charadrius hiaticula</i>, <i>Pluvialis squatarola</i>, <i>Vanellus vanellus</i>, <i>Calidris canutus</i>, <i>Calidris alpina alpina</i>, <i>Limosa limosa islandica</i>, <i>Numenius arquata</i>, <i>Tringa totanus</i>, <i>Tringa nebularia</i>, <i>Arenaria interpres</i>.</p> <p>Conservation Objectives</p> <p>To maintain*, in favourable condition, the habitats for the populations of Annex 1 species + of European importance, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats
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				<ul style="list-style-type: none"> ■ saltmarsh ■ shingle beaches ■ shallow coastal waters ■ grazing marsh <p>+ Avocet, Little Tern</p> <p>To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats ■ saltmarsh ■ shingle beaches ■ shallow coastal waters ■ grazing marsh <p>+ Dark-bellied brent goose, Shelduck, Pintail, Ringed plover, Grey plover, Knot, Dunlin, Redshank</p> <p>To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats ■ saltmarsh ■ shingle beaches ■ shallow coastal waters ■ grazing marsh <p>* maintenance implies restoration if the feature is not currently in favourable</p>
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				condition.
<p>BENFLEET & SOUTHEND MARSHES</p> <p>Unitary Authorities: Essex</p> <p>Area Ramsar (ha): 2251.31</p> <p>Area SPA (ha): 2251.31</p>	<p>Ramsar Site - UK11006</p> <p>SPA – UK9009171</p>	<p>Marine beds – 5.3%</p> <p>Tidal rivers, estuaries, mud flats, sand flats, lagoons – 85.1%</p> <p>Salt marshes– 6.7%</p> <p>Coastal brackish/ saline lagoons – 0.05%</p> <p>Rivers/ streams/creeks: permanent – 0.05%</p> <p>Freshwater marshes/ pools: permanent – 2.8%</p>	<p>Vulnerability linked to changes in the physical environment especially coastal squeeze.</p> <p>Indirect recreational pressures to facilitate visitor attractions are leading to piecemeal development and disturbance is caused to the site through construction. Area vulnerable to increased recreational pressures.</p> <p>Wildfowling and cockle fishing are threats but are well regulated by agreement.</p> <p>Studies indicate the waters in the Thames are hyper-nutriented for nitrogen and phosphorus and further studies are necessary to identify if this is having an</p>	<p>Ramsar Site Criterion</p> <p>Criterion5: Assemblages of international importance – species with peak counts in winter 32867 waterfowl</p> <p>Criterion6: Species populations occurring at levels of international importance.</p> <ul style="list-style-type: none"> - Dark-bellied brent goose 2.1% of the population - Grey plover 3.2% of the GB population - Red knot 1.4% of the population - <p>SPA</p>

			<p>adverse effect on the integrity of the site. Construction of new road bridge resulted in the loss of some designated habitat and caused disturbance to the site during construction.</p> <p>Continued maintenance dredging for port may be contributing to the removal of sediment from the estuary and other adverse effects.</p> <p>Rising sea levels and sinking land levels are compounded by coastal flood defences preventing dynamic coastal change and increasing the risk of severe erosion.</p> <p>Inputs of herbicides to the mudflats may be having indirect effects on the loss of intertidal habitats and viability of the eelgrass <i>Zostera</i> beds.</p> <p>The marsh suffers from lack of freshwater inputs due to low rainfall and would be highly vulnerable to the effects of over abstraction.</p> <p>There is a further possible threat from an increase in the level of effluent due to development.</p>	<p>Over winter the area regularly supports (Article 4.2):</p> <ul style="list-style-type: none"> - <i>Branta bernicla bernicla</i> 1.3% of the population - <i>Calidris alpina alpina</i> 2.1% of the population in GB - <i>Calidris canutus</i> 2.6% of the population - <i>Charadrius hiaticula</i> 1.3% of the population in GB - <i>Pluvialis squatarola</i> 2.3% of the population <p>Article 4.2 Qualification: An internationally important assemblage of birds Over winter the area regularly supports 34789 waterfowl including: <i>Branta bernicla bernicla</i> , <i>Charadrius hiaticula</i> , <i>Pluvialis squatarola</i> , <i>Calidris canutus</i> , <i>Calidris alpina alpina</i></p>
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