

Hornsea Project Four: Environmental Statement (ES)

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Appendix A: Metadata for the datasets used in the screening exercise

Name	Description	Data Type	Originator	Dates: Created (Downloaded by Authors)	Notes
UK_SACs	UK SACs (GB & NI)	e.g. shapefile/PDF/ spreadsheet/web data	JNCC	December 2017 (August 2021)	As required
HOW04_European_SACs_Natura2000_ETRS89	European SACs/SCIs	ArcGIS Feature Class	European Commission - Natura 2000	end 2019 (June 2020)	Used to show Doggersbank and Klaverbank SACs (for site A1)
HOW04_UK_SACs_with_Marine_Components_ETRS89	UK Marine SACs	ArcGIS Feature Class	JNCC	Dec 2018 (14/01/2019)	
HOW04_Special_Areas_of_Conservation_England_BNG	England Onshore SACs	ArcGIS Feature Class	Natural England	Jan 2019 (14/01/2019)	
HOW04_UK_SPAs_with_Marine_Components_ETRS89	UK Marine SPAs	ArcGIS Feature Class	JNCC	Dec 2018 (14/01/2019)	
HOW04_Special_Protected_Areas_England_BNG	England Onshore SPAs	ArcGIS Feature Class	Natural England	2019 (April 2019)	
HOW04_UK_Ramsar_ETRS89	England Ramsar Sites	ArcGIS Feature Class	Natural England	Jan 2019 (14/01/2019)	Guernsey sites 'Gouliot Caves and Headland' and 'Herm, Jethou and The Humps' digitised from online plans
HOW04_Offshore_WFs_20210614_ETRS89	Offshore Wind Farms	ArcGIS Feature Class	TCE, CES, EMODnet, 4Coffshore	Compiled from sources June 2021	
HOW04_Oil_and_Gas_Surface_Features_ETRS89	UK Oil & Gas Platforms	ArcGIS Feature Class	Oil & Gas Authority UK	April 2019 (April 2019)	



Appendix B: Information on Identified Designated Sites.

Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
Benfleet and Southend Marshes	Bird assemblages, dark-bellied brent goose, Branta bernicla bernicla,	https://jncc.gov.uk/jncc-	N/A
Ramsar	grey plover, Pluvialis squatarola, and red knot, Calidris canutus	assets/RIS/UK11006.pdf	
	islandica, dunlin, Calidris alpina alpina		
Blackwater Estuary (Mid-Essex Coast	Saltmarsh, Paracymus aeneus; Lestes dryas, Aedes flavescens,	https://jncc.gov.uk/jncc-	N/A
Phase 4) Ramsar	Erioptera bivittata, Hybomitra expollicata, Heliophanus	assets/RIS/UK11007.pdf	
	auratus, Trichopterna cito, Baris scolopacea, Philonthus punctus,		
	Graptodytes bilineatus, Malachius vulneratus, Campsicemus magius,		
	Myopites eximia, Idaea ochrata, Malacosoma castrensis, the spider		
	Euophrys, waterfowl assemblage, dark-bellied brent goose, Branta		
	bernicla bernicla, grey plover, Pluvialis squatarola, dunlin, Calidris		
	alpina alpina, and, black-tailed godwit, Limosa limosa islandica,		
	common shelduck, <i>Tadorna tadorna</i> , European golden plover,		
	Pluvialis apricaria apricaria, and common redshank, Tringa totanus		
	totanus.		
Breydon Water Ramsar	Waterfowl assemblage, Bewick's Swan (Cygnus columbianus	https://jncc.gov.uk/jncc-	N/A
	bewickii) and Lapwing (Vanellus vanellus).	assets/RIS/UK11008.pdf	
Chichester and Langstone Harbours	Intertidal mudflats, saltmarsh, sand and shingle spits, sand dunes,	https://jncc.gov.uk/jncc-	N/A
Ramsar	bird assemblages, ringed plover, Charadrius hiaticula, black-tailed	assets/RIS/UK11013.pdf	
	godwit, Limosa limosa islandica, and common redshank, Tringa		
	totanus totanus, dark-bellied brent goose, Branta bernicla bernicla,		
	common shelduck, Tadorna tadorna, grey plover, Pluvialis squatarola,		
	and dunlin, Calidris alpina alpina, and little tern, Sterna albifrons		
	albifrons		
Crouch & Roach Estuaries (Mid-Essex	Bupleurum tenuissimum, Carex divisa, Hordeum marinum, Inula	https://jncc.gov.uk/jncc-	N/A
Coast Phase 3) Ramsar	crithmoides, Limonium humile, Parapholis incurve, Puccinellia	assets/RIS/UK11058.pdf	
	fasciculata, Puccinellia rupestris, Ruppia cirrhosa, Salicornia pusilla,		
	Spartina maritima, Suaeda vera and Trifolium squamosum, Lestes		
	dryas, Parydroptera discomyzina, Stratiomys singularior, Hybomitra		
	expollicata, Graptodytes bilineatus, Malachius vulneratus,		



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	Malacosoma castrensis, Eucosoma catoprana, wildfowl assemblage,		
	and dark-bellied brent goose, Branta bernicla bernicla.		
Dengie (Mid-Essex Coast Phase 1)	Saltmarsh, sea kale ,Crambe maritima, sea barley, Hordeum	https://jncc.gov.uk/jncc-	N/A
Ramsar	marinum, golden samphire, Inula crithmoides, lax flowered sea	assets/RIS/UK11018.pdf	
	lavender, Limonium humile, the glassworts, Sarcocornia perennis and		
	Salicornia pusilla, small cord-grass, Spartina maritima, shrubby sea-		
	blite, Suaeda vera, the eelgrasses, Zostera angustifolia, Z. marina and		
	Z. noltei, Baris scolopacea, Atylotus latistriatus, Euophrys browning,		
	Dark-bellied brent goose, Branta bernicla bernicla, Grey plover,		
	Pluvialis squatarola, and Red knot, Calidris canutus islandica, and Bar-		
	tailed godwit, <i>Limosa lapponica lapponica</i> .		
Foulness (Mid-Essex Coast Phase 5)	Saltmarsh, nationally-rare and nationally-scarce plant species and	https://jncc.gov.uk/jncc-	N/A
Ramsar	invertebrates, Common redshank, Tringa totanus totanus. Species	assets/RIS/UK11026.pdf	
	with peak counts in winter Dark-bellied brent goose, Branta bernicla		
	bernicla Eurasian oystercatcher, Haematopus ostralegus ostralegus,		
	Grey plover, Pluvialis squatarola, Red knot, Calidris canutus islandica		
	and Bar-tailed godwit, Limosa lapponica lapponica,.		
Gibraltar Point Ramsar	Dune and saltmarsh habitats, freshwater marsh containing sedges	https://jncc.gov.uk/jncc-	N/A
	Carex spp., rushes Juncus spp., and ferns, including adder's-tongue fern	assets/RIS/UK11027.pdf	
	Ophioglossum vulgatum, nationally rare saltmarsh/dune		
	communities containing sea heath Frankenia laevis, rock sea lavender		
	Limonium binervosum and shrubby seablite Suaeda vera, wetland		
	invertebrate species.		
Gouliot Caves and Headland Ramsar	Assemblage of marine life found on the walls of the caves. Wide	GB2276RIS_1701_en.pd	N/A
	range of inter-tidal and normally sub-littoral invertebrates.	f (ramsar.org)	
	Particularly noteworthy are the sponges (Porifera), and sea		
	anemones and other hydroids (Cnidaria).		
Herm, Jethou and The Humps Ramsar	Dwarf eelgrass (Zostera noltii) beds, Maerl beds, shallow reef	GB2277RIS_1701_en.pd	N/A
	systems, sunken shipwreck reefs and Golden Kelp (Laminaria	f (ramsar.org)	
	ochroleuca) provide important fish spawning habitats for fish such as		
	Sea Bass and Black Sea Bream, with significant tidal races. The		



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	bivalve reefs contained within the site are particular significant. The		
	Site is contiguous with benthic and pelagic habitats supporting		
	flatfish and shellfish among others.		
Humber Estuary Ramsar	Dune systems and humid dune slacks, estuarine waters, intertidal	https://jncc.gov.uk/jncc-	N/A
	mud and sand flats, saltmarshes, coastal brackish/saline lagoons,	assets/RIS/UK11031.pdf	
	river lamprey (Lampetra fluviatilis), sea lamprey (Petromyzon		
	marinus), grey seals (Halichoerus grypus), waterfowl assemblage,		
	Common shelduck (Tadorna tadorna), Eurasian golden plover		
	(Pluvialis apricaria), Red knot (Calidris canutus), islandica subspecies,		
	Dunlin (Calidris alpina), Black-tailed godwit (Limosa limosa), Bar-tailed		
	godwit (Limosa lapponica) and Common redshank (Tringa totanus).		
Isles of Scilly Ramsar	Hydrobates pelagicus, Larus fuscus, and Phalacrocorax aristotelis	https://jncc.gov.uk/jncc-	N/A
	aristotelis	assets/RIS/UK11033.pdf	
Medway Estuary & Marshes Ramsar	Sea barley, Hordeum marinum, curved hard-grass, Parapholis incurva,	https://jncc.gov.uk/jncc-	N/A
	annual beard-grass, Polypogon monspeliensis, Borrer's saltmarsh-	assets/RIS/UK11040.pdf	
	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, Polistichus connexus, Cephalops		
	perspicuus, Poecilobothrus ducalis, Anagnota collini, Baris scolopacea,		
	Berosus spinosus, Malachius vulneratus, Philonthus punctus,		
	Malacosoma castrensis, Atylotus latistriatuus, Campsicnemus magius, ,		
	Cantharis fusca, Limonia Danica, waterfowl assemblage, grey plover,		
	Pluvialis squatarola, common redshank, Tringa totanus totanus, dark-		
	bellied brent goose, Branta bernicla bernicla, common shelduck,		
	Tadorna tadorna, northern pintail, Anas acuta, ringed plover,		
	Charadrius hiaticula, red knot, Calidris canutus islandica, and dunlin,		
	Calidris alpina alpina, black-tailed godwit , Limosa limosa islandica.		
Minsmere-Walberswick	This composite Suffolk coastal site contains a complex mosaic of	https://jncc.gov.uk/jncc-	N/A
Heaths and Marshes Ramsar	habitats notably, areas of marsh with dykes, extensive reedbeds,	assets/RIS/UK11044.pdf	



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	mud flats, lagoons, shingle, woodland and areas of lowland heath.		
	The site supports the largest continuous stand of reed <i>Phragmites</i>		
	australis in England and Wales and nationally rare transition in		
	grazing marsh ditch plants from brackish to fresh water. The		
	combination of habitats create an exceptional area of scientific		
	interest supporting nationally scarce plants, RDB invertebrates and		
	nationally important numbers of breeding and wintering birds.		
Northumbria Coast Ramsar	The site consists mainly of areas of rocky shore with associated	https://jncc.gov.uk/jncc-	N/A
	boulder and cobble beaches. These support a rich algal flora and	assets/RIS/UK11049.pdf	
	associated fauna and form an important feeding area for wading		
	birds. The areas of sandy beach within the site support a flora which		
	includes marram Ammophila arenaria and sea sandwort Honkenya		
	peploides.		
North Norfolk Coast Ramsar	Marshland coast with intertidal sand and mud, saltmarshes, shingle	https://jncc.gov.uk/jncc-	N/A
	banks and sand dunes, brackish-water lagoons and extensive areas	assets/RIS/UK11048.pdf	
	of freshwater grazing marsh and reed beds, nationally scarce		
	vascular plants, lichen and invertebrates, bird assemblage Sandwich		
	tern , Sterna sandvicensis sandvicensis; Common tern , Sterna hirundo		
	hirundo; and Little tern , Sterna albifrons albifrons. Red knot , Calidris		
	canutus islandica, Pink-footed goose, Anser brachyrhynchus; Dark-		
	bellied brent goose, Branta bernicla bernicla; Eurasian wigeon, Anas		
	penelope; and Northern pintail, Anas acuta. Ringed plover,		
	Charadrius hiaticula; Sanderling, Calidris alba; and Bar-tailed godwit,		
	Limosa lapponica lapponica.		
Portsmouth Harbour Ramsar	Zostera angustifolia and Zostera noltei, dark-bellied brent goose,	https://jncc.gov.uk/jncc-	N/A
	Branta bernicla bernicla, mud-snail Hydrobia ulvae, Common cord-	assets/RIS/UK11055.pdf	
	grass Spartina anglica, saltmarsh, green algae Enteromorpha spp, sea		
	lettuce Ulva lactuca, sea purslane Halimione portulacoides, and		
	saline lagoons.		
Solent & Southampton Water Ramsar	Saline lagoons, saltmarshes, estuaries, intertidal flats, shallow	https://jncc.gov.uk/jncc-	N/A
	coastal waters, grazing marshes, reedbeds, coastal woodland and	assets/RIS/UK11063.pdf	



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	rocky boulder reefs, assemblage of rare plants and invertebrates,		
	plants Orobanche purpurea and Spartina maritima, Larus		
	melanocephalus, bird assemblages, black-tailed godwit (Limosa		
	limosa islandica), Dark-bellied brent goose (Branta bernicla bernicla),		
	and Eurasian teal, (Anas crecca).		
Teesmouth and Cleaveland Coast	Bird assemblage, common redshank, Tringa totanus totanus, and red	https://jncc.gov.uk/jncc-	N/A
Ramsar	knot, Calidris canutus islandica.	assets/RIS/UK11068.pdf	
Thames Estuary & Marshes Ramsar	More than 20 British Red Data Book invertebrates, least lettuce	https://jncc.gov.uk/jncc-	N/A
	(Lactuca saligna), slender hare's-ear (Bupleurum tenuissimum), divided	assets/RIS/UK11069.pdf	
	sedge (Carex divisa), sea barley (Hordeum marinum), Borrer's		
	saltmarsh-grass (Puccinellia fasciculata), and dwarf eelgrass (Zostera		
	noltei).		
Thanet Coast and Sandwich Bay	15 British Red Data Book wetland invertebrates, and ruddy	https://jncc.gov.uk/jncc-	N/A
Ramsar	turnstone, Arenaria interpres interpres.	assets/RIS/UK11070.pdf	
The Swale Ramsar	Seven red data book invertebrates, Bupleurum tenuissimum, Carex	https://jncc.gov.uk/jncc-	N/A
	divisa, Hordeum marinum, Spartina maritima, waterfowl assemblage,	assets/RIS/UK11071.pdf	
	ringed plover, Charadrius hiaticula. black-tailed godwit, Limosa		
	limosa islandica, Eurasian wigeon, Anas penelope, northern pintail,		
	Anas acuta, and northern shoveler, Anas clypeata.		
The Wash Ramsar	Saltmarshes, major intertidal banks of sand and mud, shallow water	https://jncc.gov.uk/jncc-	N/A
	and deep channels, bird assemblage, Common redshank, Tringa	assets/RIS/UK11072.pdf	
	totanus totanus; Eurasian curlew, Numenius arquata arquata, Eurasian		
	oystercatcher, Haematopus ostralegus ostralegus; Grey plover ,		
	Pluvialis squatarola; Red knot , Calidris canutus islandica; and		
	Sanderling, Calidris alba. Black-headed gull, Larus ridibundus;		
	Common eider, Somateria ollissima mollissima; Bar-tailed godwit,		
	Limosa lapponica lapponica; Common shelduck , Tadorna tadorna;		
	Dark-bellied brent goose, Branta bernicla bernicla; Dunlin , Calidris		
	alpina alpina; and Pink-footed goose , Anser brachyrhynchus. Black-		
	tailed godwit, Limosa limosa islandica; and Ringed plover, Charadrius		



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	hiaticula. Species with peak counts in winter: European golden plover,		
	Pluvialis apricaria altifrons; and Northern lapwing , Vanellus vanellus.		
Benacre to Easton Bavents Lagoons	Benacre to Easton Bavents Lagoons is a series of percolation lagoons	https://sac.jncc.gov.uk/si	http://publications.natura
SAC	on the east coast of England. The lagoons (the Denes, Benacre	te/UK0013104	lengland.org.uk/file/6005
	Broad, Covehithe Broad and Easton Broad) have formed behind		842830950400
	shingle barriers and are a feature of a geomorphologically dynamic		
	system. Sea water enters the lagoons by percolation through the		
	barriers, or by overtopping them during storms and high spring tides.		
	The lagoons show a wide range of salinities, from nearly fully saline in		
	South Pool, the Denes, to extremely low salinity at Easton Broad.		
	This range of salinity has resulted in a series of lagoonal vegetation		
	types, including beds of narrow-leaved eelgrass Zostera angustifolia		
	in fully saline or hypersaline conditions, beds of spiral tasselweed		
	Ruppia cirrhosa in brackish water, and dense beds of common reed		
	Phragmites australis in freshwater. The site supports a number of		
	specialist lagoonal species.		
Beast Cliff – Whitby (Robin Hood's Bay)	Vegetated sea cliffs of the Atlantic and Baltic Coasts	http://publications.natur	http://publications.natura
SAC		alengland.org.uk/file/58	lengland.org.uk/file/4812
		<u>25370217512960</u>	440709890048
Bristol Channel Approaches /	Harbour porpoise (Phocoena phocoena)	https://cdn.cyfoethnatur	https://cdn.cyfoethnaturi
Dynesfeydd Môr Hafren SAC		iol.cymru/media/675771	ol.cymru/media/679449/
		/bristolchannelapproach	<u>bristolchannelapproaches</u>
		<u>esselectionassessmentd</u>	conservationobjectivesan
		ocument.pdf?mode=pad	dadviceonactivities.pdf?
		<u>&rnd=13162576075000</u>	mode=pad&rnd=1316257
		0000	60740000000
Castle Eden Dene SAC	Castle Eden Dene in north-east England represents the most	https://sac.jncc.gov.uk/si	http://publications.natura
	extensive northerly native occurrence of yew Taxus baccata woods in	te/UK0012768	lengland.org.uk/file/4911
	the UK. Extensive yew groves are found in association with ash-elm		<u>815473758208</u>
	Fraxinus-Ulmus woodland and it is the only site selected for yew		
	woodland on magnesian limestone in north-east England.		



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Site Name	Designated Features	Link to Site Citation	Link to Conservation
			Objectives
			http://publications.natura
			lengland.org.uk/file/5397
			001017753600
Dogger Bank SAC	Sandbanks which are slightly covered by sea water all the time	N/A	https://data.jncc.gov.uk/d
			ata/26659f8d-271e-
			403d-8a6b-
			300defcabcb1/DoggerBa
			<u>nk-2-</u>
			ConservationObjectives-
			<u>v1.0.pdf</u>
Doggersbank SAC	Reefs, submerged or partially submerged sea caves, and vegetated	https://eunis.eea.europa	N/A
	sea cliffs of the Atlantic and Baltic Coasts	.eu/sites/NL2008001	
Durham Coast SAC	The Durham Coast is the only example of vegetated sea cliffs on	https://sac.jncc.gov.uk/si	http://publications.natura
	magnesian limestone exposures in the UK. These cliffs extend along	te/UK0030140	lengland.org.uk/file/5518
	the North Sea coast for over 20 km from South Shields southwards to		496490586112
	Blackhall Rocks. Their vegetation is unique in the British Isles and		http://publications.natura
	consists of a complex mosaic of paramaritime, mesotrophic and		lengland.org.uk/file/5518
	calcicolous grasslands, tall-herb fen, seepage flushes and wind-		496490586112
	pruned scrub. Within these habitats rare species of contrasting		
	phytogeographic distributions often grow together forming unusual		
	and species-rich communities of high scientific interest. The		
	communities present on the sea cliffs are largely maintained by		
	natural processes including exposure to sea spray, erosion and		
	slippage of the soft magnesian limestone bedrock and overlying		
	glacial drifts, as well as localised flushing by calcareous water.		
Essex Estuaries SAC	Estuaries, mudflats and sandflats not covered by seawater at low	http://publications.natur	http://publications.natura
	tide, Salicornia and other annuals colonizing mud and sand, Spartina	alengland.org.uk/file/63	lengland.org.uk/file/5457
	swards (Spartinion maritimae), Atlantic salt meadows (Glauco-	41545577938944	<u>156304535552</u>
	Puccinellietalia maritimae), and sandbanks which are slightly covered		
	by sea water all the time.		



Site Name	Designated Features	Link to Site Citation	Link to Conservation
			Objectives
Fal and Helford SAC	Sandbanks which are slightly covered by sea water all the time,	http://publications.natur	http://publications.natura
	mudflats and sandflats not covered by seawater at low tide, Large	alengland.org.uk/file/49	lengland.org.uk/file/5315
	shallow inlets and bays, Atlantic salt meadows (Glauco-	55564324945920	<u>639078289408</u>
	Puccinellietalia maritimae), estuaries; and reefs.		
Flamborough Head SAC	Reefs, submerged or partially submerged sea caves, and vegetated	http://publications.natur	http://publications.natura
	sea cliffs of the Atlantic and Baltic Coasts	alengland.org.uk/file/48	lengland.org.uk/file/6625
		96976395042816	<u>807107883008</u>
		(archived) and	
		http://publications.natur	
		alengland.org.uk/file/59	
		77360486891520	
		(2018)	
Hainsborough, Hammond and	Sandbanks which are slightly covered by sea water all the time, and	N/A	https://designatedsites.na
Winterton SAC	Reefs.		turalengland.org.uk/Marin
			e/MarineSiteDetail.aspx?S
			iteCode=UK0030369&Sit
			<u>eName=Haisborough&Sit</u>
			<u>eNameDisplay=Haisborou</u>
			gh,%20Hammond%20an
			d%20Winterton%20SAC&
			countyCode=&responsible
			Person=&SeaArea=&IFCA
			Area=&NumMarineSeason
			ality=&HasCA=1#hlco
Humber Estuary SAC	Estuaries, Mudflats and sandflats not covered by seawater at low	http://publications.natur	http://publications.natura
	tide, Sandbanks which are slightly covered by sea water all the time,	alengland.org.uk/file/52	lengland.org.uk/file/6294
	Salicornia and other annuals colonizing mud and sand, Atlantic salt	<u>79612212871168</u>	<u>287600058368</u>
	meadows (Glauco-Puccinellietalia maritimae), Embryonic shifting		
	dunes, Coastal lagoons (*Priority feature), "Shifting dunes along the		
	shoreline with Ammophila arenaria (""white dunes""), "Fixed coastal		



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	dunes with herbaceous vegetation (""grey dunes"")" (*Priority feature), Dunes with <i>Hippoph rhamnoides</i> , Grey seal, <i>Halichoerus grypus</i> Sea lamprey, <i>Petromyzon marinus</i> , River lamprey, <i>Lampetra fluviatilis</i>		
Isles of Scilly SAC	Sandbanks which are slightly covered by seawater all the time, mudflats and sandflats not covered by seawater at low tide, reefs, and grey seal (Halichoerus grypus)	http://publications.natur alengland.org.uk/file/54 01458870583296	http://publications.natura lengland.org.uk/file/4585 113526730752
Inner Dowsing, Race Bank and North Ridge SAC	Sandbanks which are slightly covered by sea water all the time, and reefs	N/A	http://publications.natura lengland.org.uk/file/6165 144
Klaverbank SAC	Reefs, Coastal lagoons (*Priority feature), Perennial vegetation of stony banks, Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi) Embryonic shifting dunes, "Shifting dunes along the shoreline with Ammophila arenaria (""white dunes"")", "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")" (*Priority feature) and Humid dune slacks.	https://eunis.eea.europa .eu/sites/NL2008002	N/A
Limestone Coast of South West Wales/ Arfordir Calchfaen de Orllewin Cymru SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts, "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")", European dry heaths, Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites), Caves not open to the public, Submerged or partially submerged sea caves, Greater horseshoe bat Rhinolophus ferrumequinum, Early gentian Gentianella anglica, and Petalwort Petalophyllum ralfsii.	https://sac.jncc.gov.uk/si te/UK0014787	N/A
Margate and Long Sands SAC	Sandbanks which are slightly covered by sea water all the time.	N/A	http://publications.natura lengland.org.uk/file/6272 357069225984
Minsmere-Walberswick Heaths and Marshes SAC	1210 Annual vegetation of drift lines This site is one of two representatives of Annual vegetation of drift lines on the east coast of England. It occurs on a well-developed beach strandline of mixed sand and shingle and is the best and most	https://sac.jncc.gov.uk/si te/UK0012809	http://publications.natura lengland.org.uk/file/4943 448310546432



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	extensive example of this restricted geographical type. Species		http://publications.natura
	include those typical of sandy shores, such as sea sandwort		lengland.org.uk/file/5537
	Honckenya peploides and shingle plants such as sea beet Beta		398570352640
	vulgaris ssp. maritima.		
	4030 European dry heaths		
	Lowland European dry heaths occupy an extensive area of this site		
	on the east coast of England, which is at the extreme easterly range		
	of heath development in the UK. The heathland is predominantly		
	NVC type H8 Calluna vulgaris – Ulex gallii heath, usually more		
	characteristic of western parts of the UK. This type is dominated by		
	heather Calluna vulgaris, western gorse Ulex gallii and bell heather		
	Erica cinerea.		
North Antrim Coast SAC	The North Antrim Coast represents an extensive area of hard cliff	https://sac.jncc.gov.uk/si	https://www.daera-
	along one of the most exposed coastlines in Northern Ireland. The	te/UK0030224	ni.gov.uk/sites/default/file
	site exhibits contrasting geology. The western part is centred on the		s/publications/doe/land-
	Giant's Causeway with its geochemically alkali and intermediate		information-north-antrim-
	basaltic high cliff, interspersed with a series of coves. The eastern		coast-conservation-
	section hosts the limited active and extensive fossil chalk sea-cliffs.		objectives-2015.pdf
	The basalt series supports a range of communities including those		
	associated with rock crevices and cliff ledges, and with a range of		
	typical maritime grasslands and heath. Notable species for the site		
	include Wilson's filmy-fern Hymenophyllum wilsonii, thyme		
	broomrape Orobanche alba, hare's-foot clover Trifolium arvense,		
	zigzag clover Trifolium medium and common juniper Juniperus		
	communis. The chalk cliffs support mesotrophic and calcareous		
	grasslands.		
North Norfolk Sandbanks and Saturn	Sandbanks which are slightly covered by sea water all the time, and	N/A	https://jncc.gov.uk/our-
Reef SAC	reefs.		work/north-norfolk-
			sandbanks-and-saturn-
			reef-mpa/#conservation-
			<u>advice</u>



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
Pembrokeshire Marine/ Sir Benfro Forol SAC	Estuaries, large shallow inlets and bays, reefs; sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide, coastal lagoons (* Priority feature), Atlantic salt meadows (Glauco-Puccinellietalia maritimae); submerged or partially submerged sea caves, sea lamprey (Petromyzon marinus), river lamprey (Lampetra fluviatilis), allis shad (Alosa alsoa), twaite shad (Alosa fallax), grey seal (Phocoena	https://sac.jncc.gov.uk/si te/UK0013116	N/A
Plymouth Sound and Estuaries SAC	phocoena), shore dock (Rumex rupestris), and otter (Lutra lutra). Sandbanks which are slightly covered by sea water all the time; Estuaries, large shallow inlets and bays, reefs, Atlantic salt meadows (Glauco-Puccinellietalia maritimae), mudflats and sandflats not covered by seawater at low tide, shore dock (Rumex rupestris), and Allis Shad (Alosa alosa).	http://publications.naturalengland.org.uk/file/6099280326557696	http://publications.natura lengland.org.uk/file/6256 070553239552
Polruan to Polperro SAC	European dry heaths, vegetated sea cliffs of the Atlantic and Baltic coasts and Shore dock (<i>Rumex rupestris</i>)	http://publications.natur alengland.org.uk/file/48 72275815825408	http://publications.natura lengland.org.uk/file/4678 534727729152
Rathlin Island SAC	Reefs, submerged or partially submerged sea caves, sandbanks which are slightly covered by seawater all the time, annual vegetation of drift lines, and vegetated sea cliffs of the Atlantic and Baltic Coasts.	https://www.daera- ni.gov.uk/sites/default/fil es/publications/doe/lan d-information-reasons- for-designation-special- area-of-conservation- rathlin-island-2006.pdf	https://www.daera- ni.gov.uk/sites/default/file s/publications/doe/Conser vation%20Objectives%20 %282017%29.%20%20R athlin%20Island%20SAC. %20%20Version%203.1% 20-%20amendment%201 3.10.2017.%20PDFPDF
Solent Maritime SAC	Estuaries, spartina swards <i>Spartinion maritimae</i> , Atlantic salt meadows <i>Glauco-Puccinellietalia maritimae</i> , Sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide, Salicornia and other annuals colonizing mud and sand, coastal lagoons (*Priority feature), and annual vegetation of drift lines.	http://publications.natur alengland.org.uk/file/50 64469629632512	http://publications.natura lengland.org.uk/file/5336 347464433664



Site Name	Designated Features	Link to Site Citation	Link to Conservation
South Wight Maritime SAC	Reefs, submerged or partially submerged sea caves, and vegetated sea cliffs of the Atlantic and Baltic coasts.	http://publications.naturalengland.org.uk/file/61	http://publications.natura lengland.org.uk/file/6148
Southern North Sea SAC	Phocoena phocoena	90369536475136 N/A	389549113344 https://data.jncc.gov.uk/data/206f2222-5c2b-4312-99ba-d59dfd1dec1d/SouthernNorthSea-conservation-
Start Point to Plymouth Sound & Eddystone SAC	Reefs	N/A	advice.pdf http://publications.natura lengland.org.uk/file/4806 652369043456
Thanet Coast SAC	Reefs, and submerged or partially submerged sea caves.	http://publications.natur alengland.org.uk/file/51 25561445777408	http://publications.natura lengland.org.uk/file/6034 862557626368
The Wash and North Norfolk Coast SAC	Sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide, large shallow inlets and bays, reefs, Salicornia and other annuals colonizing mud and sand, Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>), coastal lagoons, Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>), Otter (<i>Lutra lutra</i>), and harbour seal (<i>Phoca vitulina</i>).	http://publications.natur alengland.org.uk/file/50 68730392379392	http://publications.natura lengland.org.uk/file/5213 489320951808
West Wales Marine / Gorllewin Cymru Forol SAC	Harbour porpoise (Phocoena phocoena)	N/A	https://naturalresourcesw ales.gov.uk/media/68143 9/w-wales-marine- objectives-advice.pdf
Benacre to Easton Bavents Lagoons SAC	Benacre to Easton Bavents Lagoons is a series of percolation lagoons on the east coast of England. The lagoons (the Denes, Benacre Broad, Covehithe Broad and Easton Broad) have formed behind shingle barriers and are a feature of a geomorphologically dynamic system. Sea water enters the lagoons	https://sac.jncc.gov.uk/si te/UK0013104	http://publications.natura lengland.org.uk/file/5222 146070806528



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	by percolation through the barriers, or by overtopping them during		http://publications.natura
	storms and high spring tides. The lagoons show a wide range of		lengland.org.uk/file/5503
	salinities, from nearly fully saline in South Pool, the Denes, to		127986110464
	extremely low salinity at Easton Broad. This range of salinity has		
	resulted in a series of lagoonal vegetation types, including beds of		
	narrow-leaved eelgrass Zostera angustifolia in fully saline or		
	hypersaline conditions, beds of spiral tasselweed Ruppia cirrhosa in		
	brackish water, and dense beds of common reed Phragmites		
	australis in freshwater. The site supports a number of specialist		
	lagoonal species.		
Benfleet and Southend Marshes SPA	Branta bernicla bernicla, Calidris alpina alpina, Calidris canutus,	http://publications.natur	http://publications.natura
	Charadrius hiaticula, Pluvialis squatarola, and waterfowl assemblage.	alengland.org.uk/file/62	lengland.org.uk/file/4710
		70173254254592	<u>112552026112</u>
Blackwater Estuary (Mid-Essex Coast	Aythya farina, Branta bernicla bernicla, Calidris alpina alpina,	http://publications.natur	http://publications.natura
Phase 4) SPA	Charadrius hiaticula, Charadrius hiaticula, Circus cyaneus, Limosa	alengland.org.uk/file/64	lengland.org.uk/file/4772
	limosa islandica, Pluvialis squatarola, Sterna albifrons, and waterfowl	39137804550144	007141179392
	assemblage.		
Breydon Water SPA	Cygnus columbianus bewickii, Philomachus pugnax;	http://publications.natur	http://publications.natura
	Pluvialis apricaria, Recurvirostra avosetta, Sterna hirundo, Vanellus	alengland.org.uk/file/60	lengland.org.uk/file/4822
	vanellus, and waterfowl assemblage.	31456824459264	248376762368
Chichester and Langstone Harbours	Anas acuta, Anas clypeata, Anas crecca, Anas Penelope, Arenaria	http://publications.natur	http://publications.natura
SPA	interpres, Branta bernicla bernicla, Calidris alba, Calidris alpina alpina,	alengland.org.uk/file/65	lengland.org.uk/file/4661
	Charadrius hiaticula, Limosa Iapponica, Mergus serrator Numenius	44101247811584	<u>175359111168</u>
	arquata, Pluvialis squatarola, Sterna albifrons, Sterna hirundo Sterna		
	sandvicensis, Tadorna tadorna, Tringa totanus, and waterfowl assemblage.		
Crouch and Roach Estuaries (Mid-Essex	Branta bernicla bernicla, and waterbird assemblage.	http://publications.natur	http://publications.natura
Coast Phase 3) SPA		alengland.org.uk/file/53	lengland.org.uk/file/6067
		<u>67340049104896</u>	995655012352



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
Dengie (Mid-Essex Coast Phase 1) SPA	Branta bernicla bernicla, Calidris canutus, Circus cyaneus, Pluvialis	http://publications.natur	http://publications.natura
	squatarola, and waterfowl assemblage.	alengland.org.uk/file/45	lengland.org.uk/file/6271
		<u>84164514856960</u>	<u>138279981056</u>
Falmouth Bay to St. Austell Bay SPA	Gavia arctica, Gavia immer, and Podiceps auratus.	http://publications.natur	http://publications.natura
		alengland.org.uk/file/54	lengland.org.uk/file/6409
		<u>58680861949952</u>	<u>515281154048</u>
Flamborough & Filey Coast SPA	Alca torda, Morus bassanus, Rissa tridactyla, Uria aalge, and seabird	http://publications.natur	http://publications.natura
	assemblage.	alengland.org.uk/file/46	lengland.org.uk/file/6055
		90761199386624	<u>638698557440</u>
Foulness (Mid-Essex Coast Phase 5) SPA	Branta bernicla bernicla, Calidris canutus, Charadrius hiaticula, Circus	http://publications.natur	http://publications.natura
	cyaneus, Haematopus ostralegus, Limosa Iapponica, Pluvialis	alengland.org.uk/file/54	lengland.org.uk/file/6519
	squatarola, Recurvirostra avosetta, Sterna albifrons, Sterna hirundo,	61169120739328	<u>660187222016</u>
	Sterna sandvicensis, Tringa totanus, and waterfowl assemblage.		
Gibraltar Point SPA	Calidris alba, Limosa Iapponica, Pluvialis squatarola, and Sterna	http://publications.natur	http://publications.natura
	albifrons.	alengland.org.uk/file/51	lengland.org.uk/file/6182
		<u>82717482237952</u>	<u>824961114112</u>
Grassholm SPA	Morus bassanus	https://jncc.gov.uk/jncc-	
		assets/SPA-	
		N2K/UK9014041.pdf	
Great Yarmouth North Denes SPA	Sterna albifrons	https://jncc.gov.uk/jncc-	http://publications.natura
		assets/SPA-	lengland.org.uk/file/6450
		N2K/UK9009271.pdf	939770961920
Greater Wash SPA	Gavia stellata, Larus minutus, Melanitta nigra, Sterna albifrons, Sterna	http://publications.natur	http://publications.natura
	hirundo; and Sterna sandvicensis.	alengland.org.uk/file/65	lengland.org.uk/file/4597
		<u>67930578075648</u>	<u>105251581952</u>
Humber Estuary SPA	Anas crecca, Anas Penelope, Anas platyrhynchos, Arenaria interpres,	http://publications.natur	http://publications.natura
	Aythya farina, Aythya marila Botaurus stellari Branta bernicla	alengland.org.uk/file/49	lengland.org.uk/file/5874
	bernicla, Bucephala clangula,Calidris alba, Calidris alpina alpina,	<u>68674834251776</u>	<u>535631159296</u>
	Calidris canutu, Charadrius hiaticula, Charadrius hiaticula, Circus		
	aeruginosus, Circus cyaneus, Haematopus ostralegus, Limosa		
	lapponica, Limosa limosa islandica, Numenius arquata, Numenius		



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
	phaeopus, Philomachus pugnax, Pluvialis apricaria, Pluvialis		
	squatarola, Recurvirostra avosetta, Sterna albifrons, Tadorna tadorna,		
	Tringa nebularia, Tringa totanus, Vanellus vanellus, and waterfowl		
	assemblage		
North Norfolk Coast SPA	Anas penelope; Anser brachyrhynchus; Botaurus stellaris; Branta	http://publications.natur	http://publications.natura
	bernicla bernicla; Calidris canutus; Circus aeruginosus; Recurvirostra	alengland.org.uk/file/45	lengland.org.uk/file/4744
	avosetta; Sterna albifrons; Sterna hirundo; and Sterna sandvicensis.	48204783730688	900111499264
Medway Estuary and Marshes SPA	Anas acuta, Anas clypeata, Anas crecca, Anas penelope, Anas	http://publications.natur	http://publications.natura
	platyrhynchos, Arenaria interpres, Aythya farina, Branta bernicla	alengland.org.uk/file/50	lengland.org.uk/file/5579
	bernicla, Calidris alpina alpina, Calidris canutus, Charadrius hiaticula,	<u>39453273849856</u>	733639364608
	Circus cyaneus, Cygnus columbianus bewickii, Falco columbarius,		
	Gavia stellata, Haematopus ostralegus, Limosa limosa islandica,		
	Numenius arquata, Phalacrocorax carbo, Pluvialis squatarola,		
	Podiceps cristatus, Recurvirostra avosetta, Recurvirostra avosetta,		
	Sterna albifrons, Sterna hirundo, Tadorna tadorna, Tringa nebularia,		
	and Tringa totanus.		
Northumbria Coast SPA	Arearia interpres, Caldris maritima, Sterna albifrons, Sterna paradiaea	https://jncc.gov.uk/jncc-	http://publications.natura
		assets/SPA-	lengland.org.uk/file/5211
		N2K/UK9006131.pdf	071631851520
Outer Thames Estuary SPA	Gavia stellata, Sterna albifrons, and Sterna hirundo	http://publications.natur	http://publications.natura
		alengland.org.uk/file/54	lengland.org.uk/file/5184
		<u>59831745413120</u>	120712069120
Portsmouth Harbour SPA	Branta bernicla bernicla, Calidris alpina alpina, Limosa limosa	http://publications.natur	http://publications.natura
	islandica, and Mergus serrator.	alengland.org.uk/file/59	lengland.org.uk/file/4859
		71306340155392	<u>370047537152</u>
Rathlin Island SPA	Alca torda, Falco peregrinus, Rissa tridactyla, Uria aalge, and seabird	https://www.daera-	https://www.daera-
	assemblage.	ni.gov.uk/sites/default/fil	ni.gov.uk/sites/default/file
		es/publications/doe/Rat	s/publications/doe/rathlin
		hlin%20SPA%20Citation	-spa-conservation-
		%20document%20and%	objectives-2015.pdf
		20map.pdf	



Site Name	Designated Features	Link to Site Citation	Link to Conservation
			Objectives
Sandlings SPA	Caprimulgus europaeus, Lullula arborea	https://jncc.gov.uk/jncc-	http://publications.natura
		assets/SPA-	lengland.org.uk/file/6246
		N2K/UK9020286.pdf	575764668416
			http://publications.natura
			lengland.org.uk/file/5201
			677619822592
Sheep Island SPA	Phalacrocorax carbo	https://jncc.gov.uk/jncc-	https://www.daera-
		assets/SPA-	ni.gov.uk/sites/default/file
		N2K/UK9020021.pdf	s/publications/doe/sheep-
			island-spa-conservation-
			objectives-2015.pdf
Solent & Southampton Water SPA	Anas crecca, Branta bernicla bernicla, Charadrius hiaticula, Larus	http://publications.natur	http://publications.natura
	melanocephalus, Limosa limosa islandica, Sterna albifrons, Sterna	alengland.org.uk/file/62	lengland.org.uk/file/5932
	dougallii, Sterna hirundo, Sterna sandvicensis, and waterfowl	24743971684352	<u>771361161216</u>
	assemblage		
Tamar Estuaries Complex SPA	Egretta garzetta; and Recurvirostra avosetta.	http://publications.natur	http://publications.natura
		alengland.org.uk/file/64	lengland.org.uk/file/5407
		<u>76982804021248</u>	902819155968
Teesmouth and Cleaveland Coast SPA	Calidris canutus, Philomachus pugnax, Recurvirostra avosetta, Sterna	http://publications.natur	http://publications.natura
	albifrons, Sterna hirundo, Sterna sandvicensis, Tringa totanus; and	alengland.org.uk/file/59	lengland.org.uk/file/4849
	waterbird assemblage	<u>18712406212608</u>	489020190720
		(archived) and	
		http://publications.natur	
		alengland.org.uk/file/49	
		03947418730496	
		(updated)	
Thames Estuary and Marshes SPA	Calidris alpina alpina, Calidris canutus, Charadrius hiaticula, Circus	http://publications.natur	http://publications.natura
	cyaneus, Limosa limosa islandica, Pluvialis squatarola, Recurvirostra	alengland.org.uk/file/65	lengland.org.uk/file/6393
	avosetta, Tringa totanus, and waterfowl assemblage	83903435358208	<u>717116370944</u>



Site Name	Designated Features	Link to Site Citation	Link to Conservation Objectives
Thanet Coast and Sandwich Bay SPA	Arenaria interpres, Pluvialis apricaria, and Sterna albifrons.	http://publications.natur	http://publications.natura
		alengland.org.uk/file/61	lengland.org.uk/file/5852
		<u>75094149742592</u>	964510236672
The Swale SPA	Anas crecca, Anas strepera, Branta bernicla bernicla; Calidris alpina	http://publications.natur	http://publications.natura
	alpina; Charadrius hiaticula, Haematopus ostralegus; Numenius	alengland.org.uk/file/45	lengland.org.uk/file/4666
	arquata, Pluvialis squatarola; Tringa totanus, breeding bird	<u>17156041523200</u>	133965963264
	assemblage, and waterfowl assemblage.		
The Wash SPA	Anas acuta, Anas Penelope, Anas strepera, Anser brachyrhynchus,	http://publications.natur	http://publications.natura
	Arenaria interpres, Branta bernicla bernicla, Bucephala clangula,	alengland.org.uk/file/58	lengland.org.uk/file/4748
	Calidris alba, Calidris alpina alpina, Calidris canutus, Cygnus	34437967216640	062010638336
	columbianus bewickii, Haematopus ostralegus, Limosa lapponica,		
	Limosa limosa islandica, Melanitta nigra, Numenius arquata, Pluvialis		
	squatarola, Sterna albifrons, Sterna hirundo, Tadorna tadorna, A162		
	Tringa totanus; and waterfowl assemblage		