

Appendix G: EAST OF ENGLAND, European and Internationally Designated sites and key Environmental Sensitivities.

Information taken from:

(i) East of England Plan Review - Habitats Regulations Assessment (incorporating Appropriate Assessment) Final Report March 2010

(ii) % figure in last column taken from Natural England's designations list and condition data of sites (data for 31 March 2012)

SPECIAL AREAS OF CONSERVATION (SACs)

SAC	Excessive recreational pressure and other types of disturbance	Other effects of increasing urbanisation (e.g. increased incidence of fires and numbers of cats preying vulnerable chicks within certain Special Protection Areas);	Deterioration in air quality (both local and diffuse);	Increased abstraction leading to a decline in water levels and freshwater inputs to hydrologically sensitive European sites;	Deterioration in water quality;	Increased 'coastal squeeze'	Loss of important supporting habitat outside the boundary of the European site	% of site in favourable condition 31/3/12
Alde, Ore and Butley Estuaries			Major (A) Roads within 200m		An area of saltmarsh was in unfavourable condition due to effects of	Saltmarsh extent has been noted to be reduced across the site. There is evidence		67%

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					pollution from agriculture/run-off.	of erosion over most of the marsh edges combined with loss of horizontal extent of saltmarsh area. The river walls where they exist are causing coastal squeeze.		
Barnack Hills and Holes	Inland site sensitive to erosion from trampling, vehicles etc							0%
Benacre to Easton Barents Lagoons	Use of off-road vehicles on a number of paths and tracks.							42%
Breckland	Inland site sensitive to erosion from trampling, vehicles etc		Particularly vulnerable to exceedance of air quality thresholds	Local ground water abstraction has a deleterious impact on the natural eutrophic lakes, the Breckland meres.				40%
Chilterns Beechwoods	Susceptible to direct nutrient enrichment, such as may result from dog fouling							83%
Devil's Dyke	Inland site sensitive to		Major (A) Roads within 200m					99%

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	erosion from trampling, vehicles etc							
Dew's Ponds	May require consideration of land outside of SAC boundary as species may be affected away from SAC							100%
Epping Forest	Inland site sensitive to erosion from trampling, vehicles etc		Major (A) Roads within 200m. Particularly vulnerable to exceedance of air quality thresholds					36%
Essex Estuaries					These habitats are vulnerable to plans or projects (onshore and offshore) which have impacts on sediment transport.	Saltmarsh erosion and intertidal coastal squeeze are affecting many areas of the SAC.		51%
Eversden and Wimpole Woods	Have bat species that could be sensitive to direct disturbance.							40%
Fenland			Exceeding air quality thresholds but not identified	Chippenham Fen has suffered	Some of the fens have a history			56%

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			as having interest features that are particularly vulnerable	from a changed hydrological regime due to abstraction from the underlying chalk aquifer.	of being subject to nutrient enrichment from agricultural run-off.			
Haisborough, Hammond and Winterton pSAC								Not assessed
Minsmere to Walberswick Heaths and Marshes	Inland site sensitive to erosion from trampling, vehicles etc		exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable					38%
Nene Washes	Sensitive to angling pressures							0%
Norfolk Valley Fens			exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable. Major (A) Roads within 200m	These alkaline fens are very vulnerable to reductions on the water table and to a decrease in the volume of spring flows arising from groundwater abstraction	The HRA of Norfolk County minerals site allocations notes that water quality could be affected at this SAC.			32%
North Norfolk Coast	Sensitive to trampling or erosion from		Major (A) Roads within 200m	There is increasing interest in				99%

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	human activity Coastal Site with mammal populations (seals) sensitive to disturbance			abstraction of groundwater for irrigation of arable land which may affect freshwater spring flows onto grazing marshes				
North Norfolk Sandbanks and Saturn Reef pSAC								Not assessed
Orfordness-Shingle Street	Sensitive to trampling or erosion from human activity							72%
Orton Pit	Inland site sensitive to erosion from trampling, vehicles etc		Major (A) Roads within 200m					30%
Ouse Washes			Major (A) Roads within 200m	Inappropriate water levels have been cited as creating unfavourable conditions at this site.				75%
Overstrand Cliffs			exceeding air quality thresholds but not identified as having interest features that are					100%

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			particularly vulnerable					
Paston Great Barn								100%
Portholme	Susceptible to direct nutrient enrichment, such as may result from dog fouling		Major (A) Roads within 200m. Particularly vulnerable to exceedance of air quality thresholds		Water pollution through discharge, and agriculture/run-off were cited as reasons for the site's unfavourable condition in the most recent assessment process.			0%
Rex Graham Reserve			Exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable. Major (A) Roads within 200m					100%
River Wensum	Inland aquatic sites with one or more of the following species: otters, mussels and white-clawed crayfish.		Major (A) Roads within 200m	The HRA of the Norfolk County Joint Core Strategy notes that "this SAC is vulnerable to alterations in the channel form which may	In the most recent condition assessment process, parts of the river were unfavourable and declining through water			14%

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				affect habitat diversity, and further development on the flood plain which might alter the flow regime of the river"	pollution from discharge and agriculture/run-off.			
Roydon Common and Dersingham Bog	Susceptible to direct nutrient enrichment, such as may result from dog fouling		Exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable. Major (A) Roads within 200m	The most recent condition assessment of Dersingham Bog SSSI recorded the site to be 38% favourable and 62% unfavourable recovering. Within the comments it is stated " <i>some drains may also warrant investigation for WCS to ensure that water level targets are met in dry summers</i> ".	The site is vulnerable to pollution of the catchment by agricultural run-off and spreading of sludge on the nearby fields.			0%
Staverton Park and the Thicks, Wantisden	Inland site sensitive to erosion from trampling,		exceeding air quality thresholds but not identified as having					74%

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	vehicles etc		interest features that are particularly vulnerable					
The Broads	<p>Inland aquatic sites with one or more of the following species: otters, mussels and white-clawed crayfish.</p> <p>Contains aquatic or wetland features sensitive to waterborne recreation.</p>		Major (A) Roads within 200m	Reduced summer flows in the northern rivers (e.g. Bure) brought about by abstraction have led to increasing saline intrusion into the site and generally drier summer conditions.	Site has suffered from eutrophication, primarily from sewage outfalls and to a lesser degree, agriculture. Some of the sewage works in the northern rivers have employed phosphorus stripping and there has been a programme of mud-pumping to remove enriched material from lakes.			42%
The Wash and North Norfolk Coast	<p>Sensitive to trampling or erosion from human activity.</p> <p>Coastal Site with mammal populations (seals) sensitive</p>					Coastal squeeze is affecting a small section of the coastline to the west of Dersingham.		70%

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	to disturbance							
Waveney and Little Ouse Valley fens				Water abstraction, over-deepening of local rivers and land drainage have reduced the groundwater inputs while increasing outflows from the fens.	This SAC is (partly) designated for its calcareous fen habitat. The decline of traditional management practices, water abstraction, over-deepening of local rivers and land drainage have all reduced groundwater inputs and increased outflows resulting in some areas drying and rotting. This causes nutrients to be released into the system which allow scrub to progressively invade the fens.			14%
Winterton – Horsey Dunes	Inland site sensitive to							68%

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	erosion from trampling, vehicles etc							
Wormley Hoddesdonpark Woods	Inland site sensitive to erosion from trampling, vehicles etc		exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable					94%

SPECIAL PROTECTION AREAS (SPA)

SPA	Excessive recreational pressure and other types of disturbance	Other effects of increasing urbanisation (e.g. increased incidence of fires and numbers of cats predating vulnerable chicks within certain Special Protection Areas);	Deterioration in air quality (both local and diffuse);	Increased abstraction leading to a decline in water levels and freshwater inputs to hydrologically sensitive European sites;	Deterioration in water quality;	Increased 'coastal squeeze'	Loss of important supporting habitat outside the boundary of the European site	% of site in favourable condition 31/3/12
Abberton Reservoir	Inland site with sensitive bird population			Reduced water availability, and increased demand, in recent years has led to				100%

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				generally low water levels; greater numbers of waders therefore use the site, and as a result no decrease in wildfowl has been attributed to low water levels.				
Alde-Ore Estuary	Coastal site with bird populations sensitive to disturbance							69%
Benacre to Easton Bavents	Coastal site with bird populations sensitive to disturbance			Parts of the SPA currently have inappropriate water levels, and weirs, dams or other structures affecting flows.				52%
Benfleet and Southend Marshes	Coastal site with bird populations sensitive to disturbance			Marsh is suffering from the lack of freshwater inputs due to low rainfall	An area of saltmarsh was in unfavourable condition due to effects of pollution from discharge. The Natura 2000 form for this site	Evidence indicates the saltmarsh is still decreasing in extent at a significant rate and the draft Thames Estuary CHaMP (2008) indicates this trend will		80%

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					notes that dredging of the Thames and inputs of herbicides to the mudflats may be having indirect effects on the loss of intertidal habitat and viability of the eelgrass <i>Zostera</i> beds.	continue. The saltmarsh is subject to coastal squeeze - which is being addressed strategically through CHAMPs/SMPs/T E2100 project and other national policy interventions.		
Blackwater Estuary (mid-Essex Coast Phase 4)	Coastal site with bird populations sensitive to disturbance			Marsh is suffering from the lack of freshwater inputs due to low rainfall	Nutrient enrichment occurs from agricultural run-off and treated sewage effluent.	The saltmarsh is eroding and degrading, and the intertidal foreshore is subject to coastal squeeze.		23%
Breckland	Inland site with sensitive bird population	Development of 6,500 new dwellings at Thetford, adjacent to SPA could cause urbanisation impacts to affect the site.	Particularly vulnerable to exceedance of air quality thresholds					42%
Breydon Water	Coastal site with bird populations sensitive to disturbance			Efficient drainage, recent droughts and poor water management				92%

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				systems have adversely affected the wet grassland part of the site (Halvergate Marshes).				
Broadland	Inland site with sensitive bird population Adverse Effects of Recreational Pressure Would be Particularly Acute		Major (A) Roads within 200m	Reduced summer flows in the northern rivers (e.g. Bure) brought about by abstraction have led to increasing saline intrusion into the site and generally drier summer conditions.	Site has suffered from eutrophication, primarily from sewage outfalls and to a lesser degree, agriculture. Some of the sewage works in the northern rivers have employed phosphorus stripping and there has been a programme of mud-pumping to remove enriched material from lakes.			41%
Colne Estuary (mid-Essex Coast Phase 2)	Coastal site with bird populations sensitive to disturbance			Low water levels are of great concern, and low freshwater flows into the estuary,		The saltmarsh is eroding and degrading, and the intertidal foreshore is subject to coastal squeeze.		18%

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				may be affecting bird numbers and/or distribution.				
Crouch and Roach Estuaries (mid-Essex Coast Phase 3)	Coastal site with bird populations sensitive to disturbance			Parts of the grazing marsh have inadequate water levels currently.	Many borrow dykes and drainage ditches remain vulnerable to run off and seepage of chemicals from adjacent farm land.	The saltmarsh is eroding and degrading, and the intertidal foreshore is subject to coastal squeeze.		23%
Deben Estuary	Coastal site with bird populations sensitive to disturbance		Major (A) Roads within 200m		In the most recent condition assessment, an area of the estuary was in unfavourable condition due to effects of pollution from agriculture/run-off.	Saltmarsh erosion is occurring on parts of the site.		23%
Dengie (mid-Essex Coast Phase 1)	Coastal site with bird populations sensitive to disturbance					Saltmarsh erosion is occurring on parts of the site.		63%
Foulness (mid-Essex Coast Phase 5)	Coastal site with bird populations sensitive to disturbance							78%
Great Yarmouth North Denes	Coastal site with bird populations							61%

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	sensitive to disturbance							
Hamford Water	Coastal site with bird populations sensitive to disturbance				The nature of the site leads to potential water quality problems due to discharge from boats and from local sewage works as well as small industrial discharges.	Saltmarsh erosion is occurring on parts of the site.		29%
Lee Valley	Inland site with sensitive bird population		Major (A) Roads within 200m	Potential problem from over-extraction of surface water for public supply, particularly during periods of drought.	The Review of Consents HRA process identified that Phosphorus concentrations in the River Lee are very high (well above the 0.1 mg/l P threshold) and affected by Thames Water wastewater treatment works which in turn may impact on the Lee Valley SPA. The draft detailed Rye Meads Water			60%

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					Cycle Study has indicated that the growth in the Stevenage and East Hertfordshire areas is constrained by the environmental capacity of the River Lee and associated Lee Valley SPA and by wastewater infrastructure issues in terms of timescale for delivery.			
Minsmere-Walberswick	Coastal site with bird populations sensitive to disturbance		Major (A) Roads within 200m		In the most recent condition assessment, an area of the saltmarsh was in unfavourable condition due to effects of pollution from agriculture/run off.	Saltmarsh erosion in places and the river wall prevents equilibrium being reached		42%
Nene Washes	Inland site with sensitive bird population		Major (A) Roads within 200m		In the most recent condition assessment,			20%

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					parts of the site were found to be failing phosphorus limits on occasion, though this situation was improving.			
North Norfolk Coast	Coastal site with bird populations sensitive to disturbance		Major (A) Roads within 200m	There is increasing interest in abstraction of groundwater for irrigation of arable land which may affect freshwater spring flows onto grazing marshes		A small area of shingle ridge was in unfavourable condition due to inappropriate management.		99%
Ouse Washes	Inland site with sensitive bird population			Inappropriate water levels have been cited as creating unfavourable conditions at this site.	In the most recent condition assessment, much of the site was unfavourable due to water pollution through discharge and agriculture/run-off, with phosphorus			15%

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					levels exceeded in places.			
Outer Thames Estuary pSPA	Coastal site with bird populations sensitive to disturbance							Not assessed
Sandlings	Inland site with sensitive bird population		exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable					3%
Stour and Orwell Estuary	Coastal site with bird populations sensitive to disturbance		Major (A) Roads within 200m		In the most recent condition assessment process, a small part of the Orwell Estuary was unfavourable through water pollution from agriculture/run-off.	Saltmarsh erosion is occurring on parts of the site.		89%
Thames Estuary and Marshes	Coastal site with bird populations sensitive to disturbance							97%
The Wash	Coastal site with bird populations sensitive to disturbance		Major (A) Roads within 200m		the estuary is fed by four large rivers which drain a			68%

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					substantial area of Eastern England. The volume and quality of water entering the Wash is dependent on the use made of these rivers for water abstraction and agricultural, and domestic effluents. Two of these rivers are the Ouse and the Nene.			
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RAMSAR SITES

Ramsar Sites	Excessive recreational pressure and other types of disturbance	Other effects of increasing urbanisation (e.g. increased incidence of fires and numbers of cats predating vulnerable chicks);	Deterioration in air quality (both local and diffuse);	Increased abstraction leading to a decline in water levels and freshwater inputs to hydrologically sensitive sites;	Deterioration in water quality;	Increased 'coastal squeeze'	Loss of important supporting habitat outside the boundary of the site
Abberton	Inland site with			Reduced water			

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Reservoir	sensitive bird population			availability, and increased demand, in recent years has led to generally low water levels; greater numbers of waders therefore use the site, and as a result no decrease in wildfowl has been attributed to low water levels.			
Benfleet and Southend Marshes	Coastal site with bird populations sensitive to disturbance Adverse Effects of Recreational Pressure Would be Particularly Acute			Marsh is suffering from the lack of freshwater inputs due to low rainfall	An area of saltmarsh was in unfavourable condition due to effects of pollution from discharge. The Natura 2000 form for this site notes that dredging of the Thames and inputs of herbicides to the mudflats may be having indirect effects on the loss of intertidal habitat	Evidence indicates the saltmarsh is still decreasing in extent at a significant rate and the draft Thames Estuary CHaMP (2008) indicates this trend will continue. The saltmarsh is subject to coastal squeeze - which is being addressed strategically through CHAMPs/SMPs/TE2100 project and other national policy interventions.	

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					and viability of the eelgrass <i>Zostera</i> beds.		
Blackwater Estuary (Mid-Essex Coast Phase 4)	Coastal site with bird populations sensitive to disturbance Adverse Effects of Recreational Pressure Would be Particularly Acute			Marsh is suffering from the lack of freshwater inputs due to low rainfall	Nutrient enrichment occurs from agricultural run-off and treated sewage effluent.	The saltmarsh is eroding and degrading, and the intertidal foreshore is subject to coastal squeeze.	
Breydon Water	Coastal site with bird populations sensitive to disturbance			Efficient drainage, recent droughts and poor water management systems have adversely affected the wet grassland part of the site (Halvergate Marshes).			
Broadland	Inland site with sensitive bird population Adverse Effects of Recreational Pressure Would be Particularly Acute		Site with major (A) roads within 200m	Reduced summer flows in the northern rivers (e.g. Bure) brought about by abstraction have led to increasing saline intrusion into the site and generally drier	Site has suffered from eutrophication, primarily from sewage outfalls and to a lesser degree, agriculture. Some of the sewage works in		

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				summer conditions.	the northern rivers have employed phosphorus stripping and there has been a programme of mud-pumping to remove enriched material from lakes.		
Chippenham Fen			Exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable	Off-site water diversion for irrigation raised concern in past. There are likely effects of existing licensed abstractions on conservation interests. Changes in water levels or table from fully licensed abstraction may have adverse effect on Purple moor grass meadow & calcareous fen because of in combination effect of seven			

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				groundwater licences.			
Colne Estuary (Mid-Essex Coast Phase 2)	Coastal site with bird populations sensitive to disturbance. Adverse Effects of Recreational Pressure Would be Particularly Acute			Low water levels are of great concern, and low freshwater flows into the estuary, may be affecting bird numbers and/or distribution.		The saltmarsh is eroding and degrading, and the intertidal foreshore is subject to coastal squeeze.	
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3)				Parts of the grazing marsh have inadequate water levels currently.	Many borrow dykes and drainage ditches remain vulnerable to run off and seepage of chemicals from adjacent farm land.	The saltmarsh is eroding and degrading, and the intertidal foreshore is subject to coastal squeeze.	
Deben Estuary	Coastal site with bird populations sensitive to disturbance		Site with major (A) roads within 200m		Area of the estuary in unfavourable condition due to pollution from agriculture/run-off.	Saltmarsh erosion is occurring on parts of the site.	
Dengie (Mid-Essex Coast Phase 1)	Coastal site with bird populations sensitive to disturbance					Saltmarsh erosion is occurring on parts of the site.	
Dersingham Bog			Site with major (A) roads within	Some drains may warrant	Site vulnerable to pollution of		

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			200m Exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable	investigation for WCS to ensure that water level targets are met in dry summers.	catchment by agricultural run-off and spreading of sludge on nearby fields.		
Foulness (Mid-Essex Coast Phase 5)	Coastal site with bird populations sensitive to disturbance						
Lee Valley	Inland site with sensitive bird population Contains aquatic or wetland features sensitive to waterborne recreation.		Site with major (A) roads within 200m	Potential problem from over-extraction of surface water for public supply, particularly during periods of drought.	Phosphorus concentrations very high and affected by Thames Water wastewater treatment works. The draft detailed Rye Meads Water Cycle Study indicated that growth in Stevenage & East erts is constrained by environmental capacity of River Lee and		

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					associated SPA and wastewater infrastructure issues in terms of timescale for delivery.		
Nene Washes	Inland site with sensitive bird population Contains aquatic or wetland features sensitive to waterborne recreation.		Site with major (A) roads within 200m		Parts of site failing phosphorus limits on occasion, though this situation improving.		
North Norfolk Coast	Coastal site with bird populations sensitive to disturbance		Site with major (A) roads within 200m	There is increasing interest in abstraction of groundwater for irrigation of arable land which may affect freshwater spring flows onto grazing marshes		A small area of shingle ridge was in unfavourable condition due to inappropriate management.	
Ouse Washes	Inland site with sensitive bird population Contains aquatic or wetland		Site with major (A) roads within 200m	Inappropriate water levels have been cited as creating unfavourable conditions at this site.	Much of site unfavourable due to water pollution through discharge and agriculture/run-off, with		

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	features sensitive to waterborne recreation.				phosphorus levels exceeded in places		
Redgrave and Lopham Fen				Affected by dredging in the past	Agricultural run-off and pesticides an issue in the past though water pollution not specifically noted as issue in most recent site assessment.		
Roydon Common			Site with major (A) roads within 200m. Exceeding air quality thresholds but not identified as having interest features that are particularly vulnerable		Site vulnerable to pollution of catchment by agricultural run-off and spreading of sludge on nearby fields.		
Sandlings	Inland site with sensitive bird population						
Stour and Orwell Estuaries	Coastal site with bird populations sensitive to disturbance		Site with major (A) roads within 200m		Small part of Orwell Estuary unfavourable through water pollution from agriculture/run-	Saltmarsh erosion is occurring on parts of the site.	

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	Adverse Effects of Recreational Pressure Would be Particularly Acute				off.		
Thames Estuary and Marshes	Coastal site with bird populations sensitive to disturbance Adverse Effects of Recreational Pressure Would be Particularly Acute						
The Wash	Coastal site with bird populations sensitive to disturbance		Site with major (A) roads within 200m		Fed by four large rivers which drain a substantial area. Volume & quality of water entering Wash dependent on use made of these rivers for water abstraction and agricultural, and domestic effluents.	Coastal squeeze is affecting a small section of the coastline to the west of Dersingham.	
Wicken Fen			Site with major (A) roads within 200m	Inappropriate water levels have been cited as creating			

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				unfavourable conditions at this site.			
Woodwalton Fen				Off-site drainage has been raised as a concern in the past.			