

Habitat Regulations Assessment Appendix 2

Screening Matrices

Applicant: East Anglia TWO Limited

Document Reference: 5.3.2

SPR Reference: EA2-DWF-ENV-REP-IBR-000932 002 Rev 01

Pursuant to APFP Regulation: 5(2)(g)

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Date: October 2019 Revision: Version 1



Revision Summary							
Rev	Rev Date Prepared by Checked by Approved by						
01	08/10/2019	Paolo Pizzolla	Julia Bolton	Helen Walker			

Descrip	Description of Revisions					
Rev Page Section Description						
01	n/a	n/a	Final for Submission			



Glossary of Acronyms

AFL	Agreement for lease
DCO	Develpoment Consent Order
EAOW	East Anglia Offshore Wind
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
IEMA	Institute of Environmental Management and Assessment
MW	Megawatt
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
PEIR	Preliminary Environmental Information Report
SPR	ScotttishPower Renewables
UK	United Kingdom
VWPL	Vattenfall Wind Power Limited
ZDA	Zone Development Agreement



Glossary of Terminology

Applicant	East Anglia TWO Limited.
Cable sealing end compound	A compound which allows the safe transition of cables between the overhead lines and underground cables which connect to the National Grid substation.
Cable sealing end (with circuit breaker) compound	A compound (which includes a circuit breaker) which allows the safe transition of cables between the overhead lines and underground cables which connect to the National Grid substation.
Construction consolidation sites	Compounds associated with the onshore works which may include elements such as hard standings, lay down and storage areas for construction materials and equipment, areas for vehicular parking, welfare facilities, wheel washing facilities, workshop facilities and temporary fencing or other means of enclosure.
Construction operation and maintenance platform	A fixed offshore structure required for construction, operation, and maintenance personnel and activities.
Development area	The area comprising the onshore development area and the offshore development area (described as the 'order limits' within the Development Consent Order).
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive, as defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017 and regulation 18 of the Conservation of Offshore Marine Habitats and Species Regulations 2017. These include candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach to the EIA and the information required to support HRA.
Horizontal directional drilling (HDD)	A method of cable installation where the cable is drilled beneath a feature without the need for trenching.
HDD temporary working area	Temporary compounds which will contain laydown, storage and work areas for HDD drilling works.



Inter-array cables	Offshore cables which link the wind turbines to each other and the offshore electrical platforms, these cables will include fibre optic cables.			
Jointing bay	Underground structures constructed at intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.			
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables.			
Link boxes	Underground chambers within the onshore cable route housing electrical earthing links.			
Meteorological mast	An offshore structure which contains metrological instruments used for wind data acquisition.			
Mitigation areas	Areas captured within the onshore development area specifically for mitigating expected or anticipated impacts.			
Marking buoys	Buoys to delineate spatial features / restrictions within the offshore development area.			
Monitoring buoys	Buoys to monitor <i>in situ</i> condition within the windfarm, for example wave and metocean conditions.			
National electricity grid	The high voltage electricity transmission network in England and Wales owned and maintained by National Grid Electricity Transmission			
National Grid infrastructure	A National Grid substation, cable sealing end compounds, cable sealing end (with circuit breaker) compound, underground cabling and National Grid overhead line realignment works to facilitate connection to the national electricity grid, all of which will be consented as part of the proposed East Anglia TWO project Development Consent Order but will be National Grid owned assets.			
National Grid overhead line realignment works	Works required to upgrade the existing electricity pylons and overhead lines (including cable sealing end compounds and cable sealing end (with circuit breaker) compound) to transport electricity from the National Grid substation to the national electricity grid.			
National Grid overhead line realignment works area	The proposed area for National Grid overhead line realignment works.			
National Grid substation	The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia TWO project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO project Development Consent Order.			



National Grid substation location	The proposed location of the National Grid substation.			
Natura 2000 site	A site forming part of the network of sites made up of Special Areas of Conservation and Special Protection Areas designated respectively under the Habitats Directive and Birds Directive.			
Offshore cable corridor	This is the area which will contain the offshore export cables between offshore electrical platforms and landfall.			
Offshore development area	The East Anglia TWO windfarm site and offshore cable corridor (up to Mean High Water Springs).			
Offshore electrical infrastructure	The transmission assets required to export generated electricity to shore. This includes inter-array cables from the wind turbines to the offshore electrical platforms, offshore electrical platforms, platform link cables and export cables from the offshore electrical platforms to the landfall.			
Offshore electrical platform A fixed structure located within the windfarm area, containing electrical equipment to aggregate the power from the wind turbines and commore suitable form for export to shore.				
Offshore export cables	The cables which would bring electricity from the offshore electrical platforms to the landfall. These cables will include fibre optic cables.			
Offshore infrastructure	All of the offshore infrastructure including wind turbines, platforms, and cables.			
Offshore platform	A collective term for the construction, operation and maintenance platform and the offshore electrical platforms.			
Onshore cable corridor	The corridor within which the onshore cable route will be located.			
Onshore cable route	This is the construction swathe within the onshore cable corridor which would contain onshore cables as well as temporary ground required for construction which includes cable trenches, haul road and spoil storage areas.			
Onshore cables	The cables which would bring electricity from landfall to the onshore substation. The onshore cable is comprised of up to six power cables (which may be laid directly within a trench, or laid in cable ducts or protective covers), up to two fibre optic cables and up to two distributed temperature sensing cables.			
Onshore development area	The area in which the landfall, onshore cable corridor, onshore substation, landscaping and ecological mitigation areas, temporary construction facilities (such as access roads and construction consolidation sites), and the National Grid Infrastructure will be located.			
Onshore infrastructure	The combined name for all of the onshore infrastructure associated with the proposed East Anglia TWO project from landfall to the connection to the national electricity grid.			



Onshore preparation	Activities to be undertaken prior to formal commencement of onshore				
works	construction such as pre–planting of landscaping works, archaeological				
Works	investigations, environmental and engineering surveys, diversion and laying of				
	services, and highway alterations.				
Onshore substation	The East Anglia TWO substation and all of the electrical equipment within the				
	onshore substation and connecting to the National Grid infrastructure.				
	-				
Onshore substation	The proposed location of the onshore substation for the proposed East Anglia				
location	TWO project.				
Platform link cable	Electrical cable which links one or more offshore platforms. These cables will				
	include fibre optic cables.				
Safety zones	A marine area declared for the purposes of safety around a renewable energy				
	installation or works / construction area under the Energy Act 2004.				
0	Dutant a material to a cities from the large to the large to				
Scour protection	Protective materials to avoid sediment being eroded away from the base of				
	the foundations as a result of the flow of water.				
Transition bay	Underground structures at the landfall that house the joints between the				
Transition bay	offshore export cables and the onshore cables.				
	onshore export capies and the onshore capies.				



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1 Introduction

1. This document provides the Information to Support Appropriate Assessment Report screening matrices for the proposed East Anglia TWO project. The matrices summarise information provided in *Appendix 1* (Offshore Habitats Regulations Assessment (HRA) Screening) of the Information to Support Appropriate Assessment (AA) report (document reference 5.3).

2 Screening Matrices

2.1 Effects Considered

2. Potential effects upon the European sites which are considered within the submitted Information to Support AA report are provided in *Table 2.1*.

Table 2.1 Potential Effects consider in Screening

Site Type	Feature(s)	Potential Effects
Special Protection Area (SPA)	All birds	Offshore effects:
Special Area of Conservation/Site of Community Importance (SAC/SCI)	Benthic habitats	 Permanent loss (and introduction of new sediment where applicable) Temporary physical disturbance Smothering due to increased suspended sediment Re- mobilisation of contaminated sediments Underwater noise and vibration Cumulative/ In-combination
	Marine mammals	 Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality



Site Type	Feature(s)	Potential Effects
		Cumulative/ In-combination
	Fish	 Permanent loss (and introduction of new sediment where applicable)
		Temporary physical disturbance
		Smothering due to increased suspended sediment
		Re- mobilisation of contaminated sediments
		Underwater noise and vibration
		Electromagnetic fields (EMF)
		Cumulative/ In-combination
	Terrestrial	Direct effects (e.g. habitat loss)
		Impacts on ex-situ habitats functionally connected to the SAC
		 Impacts from alterations to geology and land contamination
		Disturbance due to groundwater / hydrology changes
		Impacts from noise disturbance
		 Impacts from changing air quality
		Impacts from light disturbance
		Impacts from visual disturbance

2.2 Sites Considered

- The methodology for screening of sites and effects is discussed in Appendix 1
 of the Information to Support AA report.
- 4. The following sites displayed in *Table 2.2* were included in the Screening stage.

Table 2.2 Sites included in Screening

East Anglia TWO	Designated site	Ornithology	Marine Mammals	Fish	Terrestrial
Reference Number					
1	Abberton Reservoir SPA & Ramsar	✓			
2	Abers - Côtes des légendes SAC		✓		
3	Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø SAC		✓		



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
4	Ålborg Bugt, Randers Fjord Og Mariager Fjord SAC		✓			
5	Alde, Ore and Butley Estuaries SAC			√		
6	Alde-Ore Estuary SPA & Ramsar	✓				
7	Anholt og havet nord for SAC		✓			
8	Archipel des Glénan SAC		✓			
9	Baie De Canche Et Couloir Des Trois Estuaires SAC		√		√	
10	Baie de Morlaix SAC		✓			
11	Baie de Seine Occidentale SAC		✓			
12	Baie de Seine Occidentale SPA	✓				
13	Baie de Seine Orientale SAC	✓	√			
14	Baie du Mont Saint- Michel SAC		✓			
15	Balgö SAC		✓			
16	Bancs Des Flandres SAC		✓	✓		
17	Bassurelle Sandbank SAC			✓		
18	Benacre to Easton Bavents SPA	✓				
19	Benfleet and Southend Marshes SPA & Ramsar	✓				



East Anglia TWO	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
20	Berwickshire and North Northumberland Coast SAC		✓	✓		
21	Blackwater Estuary (Mid-Essex Coast Phase 4) SPA & Ramsar	✓				
22	Borkum-Riffgrund SCI		✓		✓	
23	Borkum-Riffgrund SPA	✓				
24	Braemar Pockmarks SAC			√		
25	Breydon Water SPA & Ramsar	✓				
26	Broadland SPA & Ramsar	✓				
27	Bruine Bank pSPA	✓				
28	Buchan Ness to Collieston Coast SPA	✓				
29	Calf of Eday SPA	✓				
30	Cap Sizun SAC		✓			
31	Chausey SAC	✓	✓			
32	Chaussée de Sein SAC		✓			
33	Chesil Beach and The Fleet SPA & Ramsar	✓				
34	Chichester and Langstone Harbours SPA & Ramsar	√				
35	Colne Estuary (Mid- Essex Coast Phase 2) SPA & Ramsar	✓				
36	Copinsay SPA	✓				
37	Coquet Island SPA	✓				



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
38	Côte de Granit Rose- Sept Iles SAC	✓	✓			
39	Cromarty Firth SPA & Ramsar	✓				
40	Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA & Ramsar	✓				
41	Deben Estuary SPA & Ramsar	✓				
42	Dengie (Mid-Essex Coast Phase 1) SPA & Ramsar	√				
43	Doggerbank SCI		✓			
44	Doggersbank SCI		✓			
45	Dornoch Firth and Loch Fleet SPA & Ramsar	✓				
46	Dornoch Firth and Morrich More SAC		✓			
47	Dråby Vig SAC		✓			
48	Dünenlandschaft Süd- Sylt SAC		✓			
49	Dunes De La Plaine Maritime Flamande SAC		✓	✓		
50	East Caithness Cliffs SPA	✓				
51	Essex Estuaries SAC			√		
52	Estuaire de la Canche, dunes picardes plaquées sur l'ancienne falaise, forêt d'Hardelot et falaise d'Equihen SAC		~			



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
53	Estuaire de la Seine SCI		✓			
54	Estuaires et Littoral Picards (baies de Somme et d'Authie) SAC		√		√	
55	Exe Estuary SPA & Ramsar	✓				
56	Fair Isle SPA	✓				
57	Falaise du Bessin Occidental SPA	✓				
58	Falaises du Cran Aux Oeufs et du Cap Gris- Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant SAC		✓	√		
59	Faray and Holm of Faray SAC		✓			
60	Farne Islands SPA	✓				
61	Fetlar SPA	✓				
62	Firth of Forth SPA & Ramsar	✓				
63	Firth of Tay & Eden Estuary SPA & Ramsar	✓				
64	Firth of Tay & Eden Estuary SAC		✓			
65	Flamborough and Filey Coast SPA	✓				
66	Flamborough Head SAC			✓		
67	Forth Islands SPA	✓				
68	Foula SPA	✓				



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
69	Foulness (Mid-Essex Coast Phase 5) SPA & Ramsar	√				
70	Fowlsheugh SPA	✓				
71	Frisian Front SPA	✓				
72	Gibraltar Point SPA & Ramsar	✓				
73	Great Yarmouth North Denes SPA	✓				
74	Greater Wash SPA	✓				
75	Gule Rev SCI		√			
76	Gullmarsfjorden SAC		√			
77	Haisborough, Hammond and Winterton SAC			✓		
78	Hamburgisches Wattenmeer SCI		✓			
79	Helgoland mit Helgoländer Felssockel SAC		√			
80	Hermaness, Saxa Vord and Valla Field SPA	✓				
81	Hesselø med omliggende stenrev SAC		√			
82	Hirsholmene, havet vest herfor og Ellinge Å's udløb SAC		✓			
83	Hornsea Mere SPA	✓				
84	Hoy SPA	✓				
85	Humber Estuary SAC		✓	√	√	
86	Humber Estuary SPA & Ramsar	√				



East Anglia TWO Reference	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Number						
87	Hund und Paapsand SCI		✓			
88	Imperial Dock Lock, Leith SPA	✓				
89	Inner Dowsing, Race Bank and North Ridge SCI			✓		
90	Inner Moray Firth SPA & Ramsar	✓				
91	Isle of May SAC		✓			
92	Klaverbank SAC		✓			
93	Kosterfjorden- Väderöfjorden SAC		✓			
94	Kungsbackafjorden SAC		✓			
95	Küsten- und Dünenlandschaften Amrums SAC		✓			
96	Lindisfarne SPA & Ramsar	✓				
97	Littoral Seino-Marin SPA	✓				
98	Loch of Strathbeg SPA & Ramsar	✓				
99	Løgstør Bredning, Vejlerne og Bulbjerg SAC		✓			
100	Lovns Bredning, Hjarbæk Fjord og Skals, Simested og Nørre Ådal, Skravad Bæk SAC		√			
101	Malmöfjord SAC		✓			



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
102	Marais du Cotentin et du Bessin - Baie des Veys SAC		✓			
103	Margate and Long Sands SCI			✓		
104	Marwick Head SPA	✓				
105	Måseskär SAC		✓			
106	Medway Estuary and Marshes SPA & Ramsar	✓				
107	Minsmere-Walberswick SPA & Ramsar	✓				
108	Montrose Basin SPA & Ramsar	✓				
109	Moray and Nairn Coast SPA & Ramsar	✓				
110	Mousa SPA	✓				
111	Mousa SAC		✓			
112	Nationalpark Niedersächsisches Wattenmeer SAC		√			
113	Nibe Bredning, Halkær Ådal og Sønderup Ådal SAC		✓			
114	Nidingen SAC		✓			
115	Noordzeekustzone SAC		✓	√	✓	
116	Nordre älvs estuarium SAC		✓			
117	Nordvästra Skånes havsområde SAC		✓			
118	North Caithness Cliffs SPA	✓				



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
119	North Norfolk Coast SPA & Ramsar	✓				
120	North Norfolk Sandbanks and Saturn Reef SAC			✓		
121	Northumbria Coast SPA & Ramsar	✓				
122	Noss SPA	✓				
123	NTP S-H Wattenmeer und angrenzende Küstengebiete SAC		√			
124	Oosterschelde SAC		√			
125	Orfordness - Shingle Street SAC			✓		
126	Östliche Deutsche Bucht SPA	✓				
127	Ouessant-Molène SAC		✓			
128	Outer Thames Estuary SPA	✓				
129	Papa Stour SPA	✓				
130	Papa Westray (North Hill and Holm) SPA	✓				
131	Pater Noster- skärgården SAC		✓			
132	Pentland Firth Islands SPA	✓				
133	Portsmouth Harbour SPA & Ramsar	√				
134	Presqu'ile de Crozon SAC		✓			
135	Ramsar-Gebiet S-H Wattenmeer und					



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
	angrenzende Küstengebiete SPA					
136	Récifs et marais arrière- littoraux du Cap Lévi à la Pointe de Saire SAC		√			
137	Récifs Gris-Nez Blanc- Nez SAC		✓	✓		
138	Ridens et dunes hydrauliques du détroit du Pas-de-Calais SAC		✓	✓		
139	River Derwent SAC				✓	
140	Ronas Hill - North Roe and Tingon SPA	✓				
141	Rousay SPA	✓				
142	Sälöfjorden SAC		√			
143	Sanday SAC		✓			
144	Sandlings SPA	✓				✓
145	SBZ 1 / ZPS 1 SPA		✓			
146	SBZ 2 / ZPS 2 SPA	✓				
147	SBZ 3 / ZPS 3 SPA	✓				
148	Scanner Pockmark SAC			✓		
149	Seevogelschutzgebiet Helgoland SPA	✓				
150	Skagens Gren og Skagerrak SAC		✓			
151	Solent and Southampton Water SPA & Ramsar	√				
152	Soteskär SAC		✓			
153	Southern North Sea SAC		✓			



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
154	St Abb`s Head to Fast Castle SPA	✓				
155	Staverton Park and the Thicks Wantisden SAC					✓
156	Steingrund SAC		✓			
157	Store Rev SCI		✓			
158	Stour and Orwell Estuaries SPA & Ramsar	√				
159	Strandenge på Læsø og havet syd herfor SAC		√			
160	Sumburgh Head SPA	✓				
161	Sydlige Nordsø SAC		✓			
162	Sylter Außenriff SCI	✓	√			
163	Teesmouth and Cleveland Coast SPA & Ramsar	✓				
164	Thames Estuary and Marshes SPA & Ramsar	✓				
165	Thanet Coast and Sandwich Bay SPA & Ramsar	√				
166	Thanet Coast SAC			✓		
167	The Swale SPA & Ramsar	✓				
168	The Wash and North Norfolk Coast SAC		√	✓		
169	The Wash SPA & Ramsar	✓				
170	Tregor Goëlo SAC		✓			
171	Troup, Pennan and Lion`s Heads SPA	✓				



East Anglia TWO Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
	II. (a					
172	Unterems und Außenems SCI		✓			
173	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC		✓			
174	Venø, Venø Sund SAC		✓			
175	Vlaamse Banken SAC		✓	✓	✓	
176	Vlakte van de Raan SCI/SAC		✓		✓	
177	Voordelta SAC and SPA	✓	✓	✓	✓	
178	Vrångöskärgården SAC		✓			
179	Waddenzee SPA	✓				
180	Waddenzee SAC		✓	✓		
181	West Westray SPA	✓				
182	Westerschelde & Saeftinghe SAC				✓	
183	Winterton – Horsey Dunes SAC		✓			
184	Yell Sound Coast SAC		✓			
185	Ythan Estuary, Sands of Forvie and Meikle Loch SPA	✓				

2.3 Assessment of potential effects

- 5. A summary of the evidence presented in the determination of the risk of likely significant effects (LSE) on the relevant qualifying features of a site is detailed within the footnotes to the screening matrices below.
- 6. The following abbreviations are used within the screening matrices:
 - Y = LSE cannot be excluded
 - N = LSE can be excluded
 - C = construction



- O = operation
- D = decommissioning
- 7. Where effects are not applicable to a particular feature they are greyed out.





Site	1											
Name of European Site:	Abberto	n Reserv	oir SPA a	and Rams	ar							
Distance to East Anglia TWO (km)	88 (wind	(windfarm site) and 62 (offshore cable corridor)										
Site Features	Likely ef	kely effect(s) of East Anglia TWO										
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-com	bination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features shoveler Anas clypeata, teal Anas crecca, wigeon Mareca penelope, gadwall Mareca strepera, pochard Mareca strepera, tufted duck Aythya fuligula, goldeneye Bucephala clangula, mute swan Cygnus olor, coot Fulica atra, great crested grebe Podiceps cristatus		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding cormorant <i>Phalacrocorax</i> carbo		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Survey data show little or no evidence of the SPA features found at that site occurring in the East Anglia TWO windfarm site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO windfarm site.
- b) Maximum foraging range of breeding cormorants from their colonies is 35km (Thaxter et al. 2012); the East Anglia TWO site is therefore located beyond the maximum range and so has no breeding season connectivity. It is extremely unlikely that cormorants from Abberton Reservoir SPA would visit the East Anglia TWO windfarm site in the non-breeding season as they mostly overwinter in freshwater habitat in southern England.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Abberton Reservoir SPA and Ramsar.





2														
Abers -	pers - Côtes Des Legendes SAC													
599 (wir	ndfarm :	site)												
Likely ef	fect(s) c	of East A	nglia T۱	WO										
Underw	ater noi	ise	Vessel Interactions		Indirect effects on prey			ects on Changes to wate quality			In-combination			
С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
	Abers - 599 (wir Likely ef Underw	Abers - Côtes I 599 (windfarm Likely effect(s) o Underwater no	Abers - Côtes Des Leg 599 (windfarm site) Likely effect(s) of East A Underwater noise C O D	Abers - Côtes Des Legendes : 599 (windfarm site) Likely effect(s) of East Anglia Tourist Vesse C O D C	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise Vessel Interact C O D C O	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions C O D C O D	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirections C O D C O D C	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects prey C O D C O D C O	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise	Abers - Côtes Des Legendes SAC 599 (windfarm site) Likely effect(s) of East Anglia TWO Underwater noise

a) The distance between the potential impact range of the East Anglia TWO windfarm site and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	3															
Name of European Site:	Agger T	ange, N	lissum	Brednir	ng, Skib	sted Fjc	rd og A	gerø S <i>A</i>	C							
Distance to East Anglia TWO (km)	603															
Site Features	Likely eff	kely effect(s) of East Anglia TWO														
	Underwa	ater no	ise	Vesse	l Interac	tions	Indire prey	ct effects	s on	Chang quality	ges to wa	ater	In-con	nbinatior	า	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Harbour seal <i>Phoca vitulina</i>	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)	

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





4														
Ålborg I	Bugt, R	anders	Fjord o	g Maria	ger Fjor	d SAC								
843														
Likely ef	fect(s) c	of East A	Anglia T\	NO										
Underw	ater noi	ise	Vesse	l Interac	tions	Indire prey	ct effects	s on		="	ater	In-con	nbinatior	า
С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
	Ålborg E 843 Likely ef Underw	Ålborg Bugt, R 843 Likely effect(s) of Underwater no	Ålborg Bugt, Randers 843 Likely effect(s) of East A Underwater noise C O D	Ålborg Bugt, Randers Fjord of 843 Likely effect(s) of East Anglia TV Underwater noise Vesse C O D C	Ålborg Bugt, Randers Fjord og Maria 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interact C O D C O	Alborg Bugt, Randers Fjord og Mariager Fjord 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions C O D C O D	Ålborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirections C O D C O D C	Alborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects prey C O D C O D C O	Alborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on prey C O D C O D C O D	Alborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C	Alborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C O	Alborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality C O D C O D C O D	Alborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality C O D C O D C O D C	Alborg Bugt, Randers Fjord og Mariager Fjord SAC 843 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality C O D C O D C O D C O

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site: Distance to East Anglia TWO (km)	5 Alde, (3.6	Ore an	d Butle	ey Estu	aries (SAC												
Site Features	Likely	effect(s	s) of Ea	st Angl	ia TWC)												
	Perma	nent lo	oss	physi	orary cal bance		Smoth increasuspe suspe sedim	ended	due to		nobilisa ntamina nents			rwater i		In-coi	mbinati	ion
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Offshore habitats									<u>'</u>							<u>'</u>		
Mudflats and sandflats not covered by seawater at low tide	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Estuaries	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Atlantic Salt Meadows	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)



Site Name of European Site: Distance to East Anglia TWO (km) Site Features			and 4 (off	ishore ca		dor)	Barrier	Effect		Cumula	etivo/In-	
				·						combin	ation	
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding lesser black-backed gulls Larus fuscus		Y (a)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (h)	Y (a)	N (h)
Breeding marsh harrier Circus aeruginosus		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (h)	N (h)	N (h)
Breeding avocet Recurvirostra avosetta		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (h)	N (h)	N (h)
Breeding little tern Sternula albifrons		N (e)		N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)
Breeding Sandwich tern Sterna sandvicensis		N (f)		N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (h)	N (h)	N (h)
Nonbreeding ruff <i>Philomachus</i> pugnax, avocet, redshank <i>Tringa</i> totanus		N (g)		N (g)	N (g)	N (g)	N (g)	N (g)	N (g)	N (h)	N (h)	N (h)
Seabird assemblage of international importance		Y (i)		N (h	N (h	N (h	N (h	N (h	N (h	N (h	Y (i)	N (h

- a) Model predictions of collision mortality indicate that LSE cannot be ruled out at screening and so requires further consideration.
- b) Evidence indicates that lesser black-backed gulls are not affected by displacement, disturbance or barrier effects at offshore wind farms.
- c) Marsh harrier is a migrant species. Satellite tracking suggests that marsh harriers migrate overland to the south coast of England and over the Channel to France, rather than across the North Sea.





Site 6

Name of European Site: Alde-Ore Estuary SPA and Ramsar

Distance to East Anglia TWO 37 (windfarm site) and 4 (offshore cable corridor)

(km)

- d) Avocet has not been observed in the East Anglia TWO windfarm site during bird surveys. It is highly unlikely that avocets from this SPA will migrate through the East Anglia TWO site, and if they did, their flight height is likely not to be at collision risk height.
- e) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia TWO site. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- f) Breeding Sandwich tern has a maximum foraging range of 54km from colonies, so would have connectivity with the East Anglia TWO site. However, only very small numbers of terns of any species were observed in the East Anglia TWO site in surveys. Migrating Sandwich terns from this SPA population will form a very small fraction of the very small total numbers of terns passing the site on passage.
- g) Ruff, avocet and redshank have not been observed during bird surveys at the East Anglia TWO windfarm site. It is highly unlikely that these birds would migrate through the East Anglia TWO site as their migration is likely to take a coastal route and cross sea at narrow points such as The English Channel. If they did migrate through the East Anglia TWO site their flight height is likely not to be at collision risk height.
- h) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Alde-Ore Estuary SPA and Ramsar.
- i) Herring gull populations may have connectivity with East Anglia TWO. This SPA holds the closest large colony of these species to East Anglia TWO, and some birds from that SPA may pass through East Anglia TWO during migration





Site	7														
Name of European Site:	Anholt	og hav	vet nor	d for SA	C										
Distance to East Anglia TWO (km)	904														
Site Features	Likely 6	y effect(s) of East Anglia TWO													
	Underv	nderwater noise Vessel Interactions Indirect effects on quality In-combination													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	8														
Name of European Site:	Archip	el des	Glénan	SAC											
Distance to East Anglia TWO (km)	638														
Site Features	Likely	effect(s)	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	notentia	Limnac	t range	of Fast	Anglia T\	NO and	the exte	nt of any	, effect c	n individ	uals fror	n this sit	e would	result in	no

The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 9

Name of European Site: Baie de Canche et couloir des trois estuaires SAC

Distance to East Anglia TWO 168

(km)

Marine Mammals

Site Features	Likely	effect(s)	of East	Anglia 7	ΓWΟ										
	Under	water no	oise	Vesse	Interac	tions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Grey seal Halichoerus grypus	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Harbour seal Phoca vitulina	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

Fish

Site	Likely	/ effect	(s) of E	ast An	glia TV	/0															
Features		anent at loss		Temp physi distur	-		to inc	hering creased ended nent			nobilisa ntamina nents			rwater /ibratio			romagr (EMF)		In-coi	mbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Salmon Salmo salar	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)





Site				9																	
Name of Eur	opear	n Site:		Baie	e de Ca	nche e	et coul	oir des	trois e	estuair	es SA										
Distance to (km)	East A	Anglia	TWO	168																	
Site	Likel	y effec	t(s) of I	East Ar	nglia TV	VO															
Features	Permanent Temporary physical disturbance					to in	thering creased ended nent		of co	nobilisa ntamin nents			rwater vibratio			romagi (EMF		In-co	mbinat	ion	
	С	0	D	С	0	С	0	С	0	С	0	D	С	0	D	С	0	D	С	0	D
Sea lamprey Petromyzon marinus	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
River lamprey Lampetra fluviatilis	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
Allis shad <i>Alosa alosa</i>	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site are negligible and would result in no potential for LSE.

b) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA.





Site	10														
Name of European Site:	Baie D	e Morla	aix SAC	;											
Distance to East Anglia TWO (km)	552														
Site Features	Likely	effect(s)	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	11														
Name of European Site:	Baie c	le Sein	Occid	entale S	SAC										
Distance to East Anglia TWO (km)	350														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	C	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 12 Name of European Site: Baie de Seine Occidentale SPA **Distance to East Anglia TWO** 350 (km) Site Features Likely effect(s) of East Anglia TWO Collision Displacement/Disturbance **Barrier Effect** Cumulative/In-combination mortality C 0 D С 0 D С 0 D С 0 D Breeding, wintering and N(a) N(a) N(a) N(a) N(a) N(b) N(b) N(b) N(a) N(a) passage waterbirds

- a) Survey data show little or no evidence of Baie de Seine Occidentale SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site, as most migrant waterfowl moving between northern breeding areas and southern wintering areas and using staging areas such as Baie de Seine Occidentale in France pass along the west European flyway along the continental coast rather than crossing the North Sea to the UK. At a distance of 341km, the chances of birds from this SPA moving through the East Anglia TWO site are extremely small.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Baje de Seine Occidentale SPA.





Site 13 Name of European Site: **Baie de Seine Orientale SAC Distance to East Anglia TWO** 324 (km) Likely effect(s) of East Anglia TWO Site Features Indirect effects on Changes to water In-combination Underwater noise **Vessel Interactions** quality prey С 0 D С D С 0 D С 0 D 0 D 0 С Harbour porpoise *Phocoena* N(a) phocoena Harbour seal Phoca vitulina N(a) N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

Grey seal Halichoerus grypus

potential for LSE.

potential for LSE.

С

N(a)

0

N(a)

D

N(a)

С

N(a)



0

N(a)

С

N(a)

D

N(a)

Site 14 Name of European Site: **Baie du Mont Saint-Michel SAC Distance to East Anglia TWO** 520 (km) Site Features Likely effect(s) of East Anglia TWO Changes to water Underwater noise Vessel Interactions Indirect effects on In-combination prey quality

D

N(a)

С

N(a)

0

N(a)

D

N(a)

С

N(a)

0

D

N(a)

Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no

0

N(a)

Site 15 Name of European Site: Balgö SAC **Distance to East Anglia TWO** 903 (km) Site Features Likely effect(s) of East Anglia TWO **Vessel Interactions** Indirect effects on Changes to water Underwater noise In-combination quality prey C 0 С 0 С 0 D С 0 D С 0 D D D Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no

^{5.3.4} Information to Support AA – Screening Matrices





Site 16

Name of European

Bancs des Flandres SAC

Site:

Distance to East 82 (windfarm site) and 93 (offshore cable corridor)

Anglia TWO (km)

Marine Mamma	

Site Features	Likely	effect(s) o	of East Ar	nglia TWC)										
	Under	water nois	se	Vesse	Interacti	ons	Indirec	t effects	on prey	Chang quality	es to wat	er	In-comb	oination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise Phocoena phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	Y(c)	Y(c)	Y(c)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

Benthic Habitats

Site Features	Perm	anent lo	oss	physi	oorary cal bance		increa	ended	lue to		nobilisat minate o nents			rwater r ibration		In-cor	mbinatio	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)





les Flandres SAC								
Ifarm site) and 93 (c	offshore cab	e corrido	r)					
				Ifarm site) and 93 (offshore cable corridor) otential impact range of East Anglia TWO and the e				otential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in

- b) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes
- c) The East Anglia TWO windfarm site is within the foraging range of grey seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out.





Site 17 Name of European Site: **Bassurelle Sandbank SAC Distance to East Anglia TWO** 169 (windfarm site) and 172 (offshore cable corridor) (km) Site Features Likely effect(s) of East Anglia TWO Re-mobilisation of Permanent loss Temporary physical Smothering due to Underwater noise In-combination disturbance increased contaminated and vibration suspended sediments sediment С 0 0 С 0 D С 0 D С 0 D D С D С 0 D Ν N (a) Sandbanks (a) (a) which are slightly covered by sea water all the time

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE.





Site 18 **Benacre to Easton Bavents SPA** Name of European Site: 19 (onshore cable corridor) **Distance to East Anglia TWO** (km) Site Features Likely effect(s) of East Anglia TWO Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/Incombination 0 С 0 D С D С 0 D С 0 D Breeding Great bittern Botarus stellaris N (a) Breeding Eurasian marsh harrier N (a) Circus aeruginosus Breeding Little tern Sterna albifrons N (a) N (a)

a) No overlap therefore no direct effect and beyond the range of potential significant indirect effect





Maine of European Site.	enfleet & S I 0 (windfar											
Site Features	Likely e	ffect(s) of	East Angl	ia TWO								
	Collision	n mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features brent goose <i>Branta bernicla</i> , dunlin <i>Calidris alpina</i> , knot <i>Calidris canutus</i> , ringed plover <i>Charadrius hiaticula</i> , grey plover <i>Pluvialis squatarola</i>		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- b) Survey data show little or no evidence of Benfleet & Southend Marshes SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Benfleet & Southend Marshes SPA and Ramsar.





Site 20 Name of European Site: **Berwickshire and North Northumberland Coast SAC Distance to East Anglia TWO** 4126 (windfarm site) and 407 (offshore cable corridor) (km) **Marine Mammals** Site Likely effect(s) of East Anglia TWO **Features** Underwater noise Vessel Indirect effects on Changes to In-combination Interactions water quality prey С 0 D С D С 0 D С O D С 0 D 0 N(a) N(a) Grey seal N(a) Halichoerus grypus **Benthic Habitats** Site Temporary Smothering due Re-Underwater noise Permanent loss In-combination physical to increased Features mobilisation of and vibration suspended disturbance contaminate d sediment sediments С 0 D С 0 D С 0 D С O D С 0 D С 0 D Coastal N (b) N (b) Ν Ν Ν Ν Ν N (b) N (b) N (b) Ν Ν Ν Ν Ν Ν lagoons (b) Submerged N (b) N (b) Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν N (b) N (b) N (b) (b) (b) (b) or partially (b) (b) (b) (b) (b) (b) (b) (b)





Site		20															
Name of Euro	opean Site:	Berw	ickshi	re and	North	Northu	ımberl	and Co	ast S	AC							
Distance to E (km)	East Anglia TWO	4126	(windf	arm si	te) and	i 407 (offsho	re cabl	e corr	idor)							
submerged sea caves																	
,	listance between the in no potential for LS		mpact	range (of East	Anglia	TWO	and the	exten	it of ar	ny effe	ect on i	ndividu	als fror	n this site	e would	
b) The d	listance between the	offshore p	roject	area ar	nd the d	designa	ated site	e is bev	ond th	ne ran	ae of	any po	tential	LSF			





Site 21

Name of European Site: Blackwater Estuary SPA and Ramsar

Distance to East Anglia TWO 88 (windfarm site) and 64 (offshore cable corridor)

(KIII)												
Site Features	Likely	effect(s)	of East A	nglia TW	0							
	Collisio	on morta	ality	Displace	ement/Dis	turbance	Barrier l	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features brent goose, dunlin, ringed plover, blacktailed godwit <i>Limosa limosa limosa</i> , grey plover		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (f)	N (f)	N (f)
Nonbreeding hen harrier Circus cyaneus		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (f)	N (f)	N (f)
Breeding pochard		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (f)	N (f)	N (f)
Breeding ringed plover		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (f)	N (f)	N (f)
Breeding little tern		N (e)		N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)

- a) Survey data show little or no evidence of Blackwater Estuary SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration.
- b) Survey data show no evidence of Blackwater Estuary SPA feature (hen harrier) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- c) Survey data show no evidence of Blackwater Estuary SPA feature (pochard) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- d) Survey data show no evidence of Blackwater Estuary SPA feature (ringed plover) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.





- e) e) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia TWO site.

 Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- f) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Blackwater Estuary SPA and Ramsar.





Site 22

Name of European Borkum-Riffgrund (Borkum Reef Ground) SCI

Site:

Distance to Anglia TWO		3:	20																		
Marine Mam	mals																				
Site Features	6	Li	ikely e	ffect(s)	of East	Angl	ia TWO														
		U	Inderw	ater noi	se	\	Vessel I	nteracti	ons		Indirect	effects	on prey		anges ality	to wate	r	In-c	ombir	nation	
		С	;	0	D	(С	0	D		С	0	D	С		0	D	С		0	D
Harbour porp		a I	۷ (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N	(a)		N (a)	N (a)	N (a)	N (a)
Grey seal Halichoerus	grypus	1	۷ (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N	(a)		N (a)	N (a)	N (a)	N (a)
Harbour seal	Phoca	, ,	۷ (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		(a)		N (a)	N (a)	N (a)	N (a)
Fish		•								<u> </u>		·		•					·		
Site Features		anent at loss		Tempo physic disturb	al		Smoth increasuspe suspe sedim	ended	lue to	of c	mobilis ontamir iments		Undervand vil				omagno (EMF)	etic	In-c	ombinat	tion
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D





Twaite	N(b)																				
shad <i>Alosa</i>																					
fallax																					

- a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- b) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA.





Site	23											
Name of European Site:	Borkum-F	Riffgrund	SPA									
Distance to East Anglia TWO (km)	320											
Site Features	Likely effe	ct(s) of E	ast Anglia	a TWO								
	Collision n	nortality		Displace	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-co	mbination
	С	0	D	С	0	D	С	0	D	С	0	D
Nonbreeding seabird assemblage including as named features black-throated diver <i>Gavia arctica</i> , redthroated diver <i>Gavia stellata</i> , common gull <i>Larus canus</i> , lesser black-backed gull, great black-backed gull <i>Larus marinus</i> , little gull <i>Larus minutus</i> , kittiwake <i>Rissa tridactyla</i> , common tern <i>Sterna hirundo</i> , Arctic tern <i>Sterna paradisaea</i> , Sandwich tern, gannet <i>Morus bassanus</i> , guillemot <i>Uria aalge</i>		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration relative to the size of Biologically Defined Minimum Population Scale (BDMPS) regional populations. Not only are the sites 320km apart, but much of the seasonal movement of birds avoids crossing of the North Sea so that birds on the continental side of the North Sea are more likely to move along the continental coast rather than crossing to the UK.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Borkum-Riffgrund SPA.





Site 24

Name of European Site: Braemar Pockmarks SAC

Distance to East Anglia TWO 741

(km)																		
Site	Likely 6	effect(s)	of East A	Anglia T\	WO													
Features	Perma	anent los	SS	Temp disturb	orary ph cance	iysical	Smoth increa suspe sedim	nded	ue to		obilisation minated ents	on of		water nation	oise	In-con	nbinatio	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Submarine structures made by leaking gases	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.





Site 25

Name of European Site: Breydon Water SPA and Ramsar

Distance to East Anglia TWO 44 (windfarm site) and 33 (offshore cable corridor)

Site Features	Likely ef	fect(s) of	East Angli	ia TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features Bewick's swan Cygnus columbianus bewickii, ruff, golden plover Pluvialis apricaria, avocet, lapwing Vanellus vanellus		Y (a)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	Y (a)	N (b)
Breeding common tern Sterna hirundo		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (d)	N (d)	N (d)

- a) Band model estimates of collision mortality indicate that LSE cannot be ruled out at the Screening stage.
- b) Survey data show little or no evidence of SPA features occurring in East Anglia TWO and migrations of birds from this SPA are likely to result in negligible numbers passing through the site during migration.
- c) SPA is far beyond the maximum foraging range of common tern (30km) so has no breeding season connectivity. Numbers of SPA common tern migrating through the East Anglia TWO windfarm site are likely to be extremely small relative to BDMPS.
- d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Breydon Water SPA and Ramsar





Site 26

Name of European Site: Broadland SPA and Ramsar

Distance to East Anglia TWO 34 (windfarm site) and 21 (offshore cable corridor)

Site Features	Likely effe	ect(s) of Ea	st Anglia T\	NO offshore	e project ar	ea						
	Collision i	mortality		Displacen	nent/Disturt	oance	Barrier Ef	fect		Cumulativ	re/In-combi	nation
			D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features shoveler, wigeon, gadwall, Bewick's swan, whooper swan, ruff	N (b)	Y (a)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (c)	Y (a)	N (c)

- a) Band model estimates of collision mortality indicate that LSE cannot be ruled out at the Screening stage.
- b) Survey data show little or no evidence of SPA features occurring in East Anglia TWO and migrations of birds from this SPA are likely to result in negligible numbers passing through the site during migration.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Breydon Water SPA and Ramsar





Site	27											
Name of European Site:	Bruine Ba	nk (Brow	n Ridge) p	SPA								
Distance to East Anglia TWO (km)	32 (offsho	re cable (corridor)									
Site Features	Likely et	ffect(s) of	East Angl									
	Collision	Collision mortality			ement/Dis	turbance	Barrier E	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Nonbreeding common guillemots <i>Uria</i> aalge and razorbills <i>Alca torda</i>		N (b)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (d)	N (d)	N (d)

- a) The designated features of Bruine Bank pSPA are likely to be common guillemot and razorbill, species for which low flight height results in low risk of collision with offshore wind turbines. Furthermore, birds wintering on Bruine Bank are likely to remain at the pSPA because it is a high-quality feeding habitat (i.e. the reason why this concentration of birds is being proposed for SPA status), and so these birds are unlikely to be at risk of collision at the East Anglia TWO site.
- b) Bruine Bank is high quality feeding habitat for nonbreeding piscivorous seabirds from breeding areas further north, so the birds in that pSPA are unlikely to pass through the East Anglia TWO site on migration as it lies west rather than north of the pSPA. Therefore, displacement, disturbance and barrier effect at the East Anglia TWO site will not be likely to affect birds on Bruine Bank pSPA.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Bruine Bank pSPA.





Site	28											
Name of European Site:	Buchan Ne	ess to Co	llieston C	oast SPA	L							
Distance to East Anglia TWO (km)	515											
Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumula		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage, including as named features kittiwake, shag <i>Phalacrocorax aristotelis</i> , fulmar, guillemot, herring gull <i>Larus argentatus</i>		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Buchan Ness to Collieston Coast SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Buchan Ness to Collieston Coast SPA.





Site 29
Name of European Site: Calf of Eday SPA

Distance to East Anglia TWO 825

(km)												
Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	n mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features cormorant, fulmar <i>Fulmarus glacialis</i> , guillemot, kittiwake and great blackbacked gull		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Calf of Eday SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Calf of Eday SPA.

Grey seal



С

N(a)

0

N(a)

D

N(a)



Site 30 **Cap Sizun SAC** Name of European Site: 639 **Distance to East Anglia TWO** (km) Site Features Likely effect(s) of East Anglia TWO Underwater noise **Vessel Interactions** Indirect effects on Changes to water In-combination quality prey

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

D

N(a)

С

N(a)

0

N(a)

D

N(a)

С

N(a)

0

D

N(a)

С

N(a)

0

N(a)

D

N(a)

С

N(a)

0

N(a)

Site Name of European Site: Distance to East Anglia TWO (km)	31 Chaus 430	sey SAC	;																		
Site Features		effect(s water no		t Anglia Vessel	TWO Interact	ions	Indirec	t effects	on	Chang	es to wa	ater In-combination									
	С	0	D	С	0	D	Ć	0	D	C	0	D	С	0	D						
Grey seal	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)						
a) The distance between the	potentia	al impac	t range	of East	Anglia T\	NO and	the exte	nt of any	effect o	n individ	uals fror	n this sit	e would	result in	no						

 The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

potential for LSE.





Site 32 Chaussée de Sein SAC Name of European Site: 700 **Distance to East Anglia TWO** (km) Site Features Likely effect(s) of East Anglia TWO Underwater noise **Vessel Interactions** Indirect effects on Changes to water In-combination quality prey 0 0 D С 0 D 0 D С D С 0 D Grey seal N(a) a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no

Site	33												
Name of European Site:	Ches	il Beach	and The	Fleet SPA	& Rams	ar							
Distance to East Anglia TWO (km)	360 (windfarm site) and 336 (offshore cable corridor)											
Site Features Likely effect(s) of East Anglia TWO													
	Likely effect(s Collision more				Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat combina		
	C O D				С	0	D	С	0	D	С	0	D
Nonbreeding brent goose			N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Survey data show little or no evidence of Chesil Beach & The Fleet SPA feature (brent goose) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Chesil Beach & The Fleet SPA and Ramsar.





Site 34

Name of European Site: Chichester and Langstone Harbours SPA & Ramsar

Distance to East Anglia TWO 245 (windfarm site) and 225 (offshore cable corridor)

Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier I	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Migratory waterbird assemblage including as named features pintail Anas acuta, shoveler, teal, wigeon, turnstone Arenaria interpres, brent goose, sanderling Calidris alba, dunlin, ringed plover, bar-tailed godwit Limosa lapponica, red-breasted merganser Mergus serrator, curlew Numenius arquata, grey plover, shelduck Tadorna tadorna, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding little tern, common tern, Sandwich tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Survey data show little or no evidence of Chichester & Langstone Harbour SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Little tern, common tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km and 54km respectively, so there is no connectivity between the SPA and East Anglia TWO site. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded.





c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Chichester & Langstone Harbour SPA and Ramsar.





Site 35

Colne Estuary SPA and Ramsar

Distance to East Anglia

Name of European Site:

77 (windfarm site) and 55 (offshore cable corridor)

TWO (km)

Site Features	Likely e	ffect(s) of	East Angl	ia TWO								
	Collision	n mortality	′	Displace	ement/Dis	turbance	Barrier I	Effect		Cumula combina		
	С	O D C N (a) N			0	D	С	0	D	С	0	D
Nonbreeding brent goose		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (g)	N (g)	N (g)
Nonbreeding redshank		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (g)	N (g)	N (g)
Nonbreeding hen harrier		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (g)	N (g)	N (g)
Breeding pochard		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (g)	N (g)	N (g)
Breeding ringed plover		N (e)		N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (g)	N (g)	N (g)
Breeding little tern		N (f)		N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)

- a) Survey data show no evidence of Colne Estuary SPA feature (brent goose) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Survey data show no evidence of Colne Estuary SPA feature (redshank) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- c) Survey data show no evidence of Colne Estuary SPA feature (hen harrier) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- d) Survey data show no evidence of Colne Estuary SPA feature (pochard) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- e) Survey data show no evidence of Colne Estuary SPA feature (ringed plover) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.





Site 35

Name of European Site: Colne Estuary SPA and Ramsar

Distance to East Anglia 77 (windfarm site) and 55 (offshore cable corridor)

TWO (km)

f) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia TWO site. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.

g) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Colne Estuary SPA and Ramsar.

Site 36

Name of European Site: Copinsay SPA

Distance to East Anglia TWO 789

(km)												
Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	mortality	,	Displace	ement/Dis	turbance	Barrier I	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features fulmar, guillemot, kittiwake and great blackbacked gull		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

a) Copinsay SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.





Site 36

Name of European Site: Copinsay SPA

Distance to East Anglia TWO 789

(km)

b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Copinsay SPA.

Site 37

Name of European Site: Coquet Island SPA

Distance to East Anglia TWO 414

(1011)												
Site Features	Likely ef	fect(s) of	East Angli	ia TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding roseate tern <i>Sterna dougallii</i> , Arctic tern, common tern, Sandwich tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Coquet Island SPA is far beyond the maximum foraging range of designated seabird species (all less than 55km) so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Coquet Island SPA.





38															
Côte D	De Gran	nit Rose	-Sept-II	es SAC											
512		fect(s) of East Anglia TWO													
Likely															
Under	water n	oise	Vessel	Interact	ions	Indired prey	t effects	on	_		ter	In-com	bination		
С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
	Côte E 512 Likely Under	Côte De Gran 512 Likely effect(s Underwater no	Côte De Granit Rose 512 Likely effect(s) of Eas Underwater noise C O D	Côte De Granit Rose-Sept-lle 512 Likely effect(s) of East Anglia Underwater noise Vessel C O D C	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interact C O D C O	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions C O D C O D	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	Côte De Granit Rose-Sept-Iles SAC 512 Likely effect(s) of East Anglia TWO Underwater noise	

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 39

Name of European Site: Cromarty Firth SPA & Ramsar

Distance to East Anglia TWO 716 (windfarm site) and (offshore cable corridor)

Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumula combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features curlew, dunlin, grey-lag goose <i>Anser anser</i> , pintail, red-breasted merganser, whooper swan, bar-tailed godwit, oystercatcher <i>Haematopus</i> ostralegus, wigeon, scaup <i>Aythya marila</i> , knot and redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding common tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (d)	N (d)	N (d)
Breeding osprey Pandion haliaetus		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)

- a) Survey data show little or no evidence of Cromarty Firth SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) SPA is beyond maximum foraging range of common tern (30km), and so has no breeding season connectivity. Numbers of SPA common tern migrating through the East Anglia TWO site are likely to be extremely small relative to BDMPS.
- c) Osprey has not been observed in the East Anglia TWO site, and it is improbable than any ospreys from the SPA migrate through the East Anglia TWO site.





Site 39

Name of European Site: Cromarty Firth SPA & Ramsar

Distance to East Anglia TWO 716 (windfarm site) and (offshore cable corridor)

(km)

d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Cromarty Firth SPA and Ramsar.

Name of European Site: Crouch and Roach Estuaries SPA & Ramsar

Distance to East Anglia TWO (km)

Site Features

Likely effect(s) of East Anglia TWO

Collision mortality

Displacement/Disturbance

Barrier Effect

Cumulative/Incombination

	С	0	D	С	0	D	С	0	D	С	0	D
Nonbreeding brent goose		N (a)		N (a)	N (c)	N (c)	N (c)					
Nonbreeding hen harrier		N (b)		N (b)	N (c)	N (c)	N (c)					

- a) Survey data show little or no evidence of Crouch & Roach Estuary SPA feature (brent goose) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Survey data show no evidence of Crouch & Roach Estuary SPA feature (hen harrier) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Crouch & Roach Estuary SPA and Ramsar.





41 Site **Deben Estuary SPA & Ramsar** Name of European Site: **Distance to East Anglia TWO** 250 (windfarm site) and 20 (offshore cable corridor) (km) Likely effect(s) of East Anglia TWO Site Features **Barrier Effect** Cumulative/In-Collision mortality Displacement/Disturbance combination С 0 D С 0 D С 0 D С 0 D Nonbreeding dark-bellied brent goose N (a) N (a) N (a) N (a) N (c) N (a) N (a) N (a) N (c) N (c) Branta bernicla bernicla N (b) N (b) N (b) N (b) N (c) Nonbreeding avocet N (b) N (b) N (b) N (c) N (c)

- a) Survey data show little or no evidence of Deben Estuary SPA features (brent goose) occurring in the East Anglia TWO site, and migrations of birds from the SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Survey data show no evidence of avocets occurring within the East Anglia TWO site, and numbers migrating through the site are likely to be negligible.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Deben Estuary SPA and Ramsar.



Site	42														
Name of European Site:	Dengie SP	Dengie SPA & Ramsar													
Distance to East Anglia TWO (km)	87 (windfar	37 (windfarm site) and 66 (offshore cable corridor)													
Site Features	Likely effect(s) of East Anglia TWO														
	Collisio	n mortality	′	Displace	ement/Dis	turbance	Barrier	Effect		Cumula					
	С	0	D	С	0	D	С	0	D	С	0	D			
Nonbreeding brent goose		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)			
Nonbreeding knot		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)			
Nonbreeding grey plover		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)			
Nonbreeding hen harrier		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)			

a) Survey data show little or no evidence of Dengie SPA features (brent goose, knot, grey plover, hen harrier) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.

b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Dengie SPA and Ramsar.





Site Name of European Site: Distance to East Anglia TWO (km)	43 Dogge 365	erbank	SCI															
Site Features	Likely effect(s) of East Underwater noise			Vessel	TWO Interact		prey	t effects		quality	es to wa			bination	ition			
	C	0	D	С	0	D	С	0	D	С	0	D	С	0	D			
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)			
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)			

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	44														
Name of European Site:	Dogg	ersbanl	SAC												
Distance to East Anglia TWO (km)	232														
Site Features	Likely effect(s) of East Anglia TWO														
	Under	water n	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal <i>Phoca vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

potential for LSE.



Site 45

Name of European Site: Dornoch Firth and Loch Fleet SPA & Ramsar

Distance to East Anglia TWO 722 (windfarm site) and 714 (offshore cable corridor)

Site Features	Likely ef	Likely effect(s) of East Anglia TWO													
	Collision	Collision mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulative/In- combination					
	С	0	D	С	0	D	С	0	D	С	0	D			
Wintering and passage waterbird assemblage including as named features curlew, dunlin, greylag goose, wigeon, bar-tailed godwit, teal, oystercatcher		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)			
Breeding osprey		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)			

- a) Survey data show little or no evidence of Dornoch Firth & Loch Fleet SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Osprey has not been observed in the East Anglia TWO site, and it is improbable than any ospreys from the SPA migrate through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Dornoch Firth & Loch Fleet SPA & Ramsar.





Site	46															
Name of European Site:	Dorno	Dornoch Firth and Morrich More SAC														
Distance to East Anglia TWO (km)	766															
Site Features		effect(s) water no		t Anglia Vessel	TWO Interact	ions	Indired	t effects	on	Change	es to wa	ter	In-combination			
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site: Distance to East Anglia TWO (km)	47 Dråby 642	Vig SA	C												
Site Features	_	effect(s water n		t Anglia Vessel	TWO Interact	ions	Indired prey	t effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal <i>Phoca vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	48														
Name of European Site:	Dünen	landsc	haft Sü	d-Sylt S	AC										
Distance to East Anglia TWO (km)	486														
Site Features	Likely	effect(s	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 49 Name of European Site: **Dunes De La Plaine Maritime Flamande SAC** Distance to East Anglia TWO 106 (windfarm site) and 118 (offshore cable corridor) (km) Marine Mammals Likely effect(s) of East Anglia TWO Site Features Underwater noise Vessel Interactions Indirect effects on Changes to water In-combination quality prey С 0 0 D 0 D 0 O D D D N(a) N(a) N(a) N(a) N(a) N(a) Harbour seal N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) Benthic Habitats Temporary physical Smothering due to Re- mobilisation of Underwater noise and In-combination Site Features Permanent loss increased suspended contaminate d disturbance vibration sediment sediments 0 D С 0 D 0 D 0 D С 0 D С 0 D Sandbanks which are N (b) slightly covered by sea water all the time N (b) Mudflats and sandflats N (b) not covered by seawater at low tide





Site 49

Name of European Site: Dunes De La Plaine Maritime Flamande SAC

Distance to East Anglia TWO 106 (windfarm site) and 118 (offshore cable corridor)

(km)

a) The distance between the potential impact range of East Anglia TWO and the site is beyond that of potential for direct or indirect effects.

b) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.

including as named features cormorant, guillemot, herring gull, puffin *Fratercula arctica*, razorbill, shag, fulmar and great black-backed

Breeding peregrine Falco peregrinus

Site

gull



50



Name of European Site: **East Caithness Cliffs SPA Distance to East Anglia TWO** 741 (km) Site Features Likely effect(s) of East Anglia TWO Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/Incombination С С 0 D С 0 D 0 D С 0 D Breeding seabird assemblage N (a) N (c) N (c) N (c)

a) East Caithness Cliffs SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.

N (b)

b) Peregrines breeding in the UK normally remain close to their breeding areas throughout the year, and are therefore very unlikely to migrate offshore.

N (b)

N (b)

c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at East Caithness Cliffs SPA.





Site 51

Essex Estuaries SAC

Distance to East Anglia TWO

77 (windfarm site) 55 (offshore

km)

Name of European Site:

cable corridor)

(KIII)																		
Site Features	Likely	effect(s)	of East	Anglia	TWO													
	Perma	anent lo	ss	Temp physic distur	-		Smotl increa suspe sedim	ended	lue to		obilisati minated ents			rwater r ribration		In-cor	nbinatio	n
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Estuaries	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Mudflats and sandflats not covered by seawater at low tide	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE.

potential for LSE.





Site	51														
Name of European Site:	Essex	Estuar	ies SA	C											
Distance to East Anglia TWO (km)	77 (wi	ndfarm	site) 5	offsho	ore cable	e corrido	or)								
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	notentia	l impac	t range	of Fast A	· Anglia T\	NO and	the exte	nt of any	effect o	n individi	uals from	n this site	wonld i	esult in	no

5.3.4 Information to Support AA – Screening Matrices





Site Name of European Site: Distance to East Anglia TWO (km)	52 Estua SAC 155	ire De L	₋a Canc	he, Dun	es Picar	des Pla	quees S	Sur L'and	cienne F	alaise, F	oret D'r	ardelot	Et Falais	se D'equ	iihen
Site Features		effect(s water n		t Anglia Vessel	TWO Interact	ions	Indired	ct effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal <i>Phoca vitulina</i> a) The distance between the potential for LSE.	N(a) e potentia	N(a)	N(a)	N(a) of East A	N(a) Anglia T\	N(a) VO and	N(a) the exte	N(a) nt of any	N(a)	N(a) on individ	uals fron	N(a)	N(a) e would r	N(a) result in	N(a) no

Site Name of European Site:	53 Estua	ire de la	a Seine	SCI											
Distance to East Anglia TWO (km)	309														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impac	t range	of East	Anglia T	WO and	the exte	nt of any	y effect o	n individ	uals fror	n this sit	e would	result in	no

potential for LSE.





Site 54

Name of European Site: Estuaires et littoral picards (baies de Somme et d'Authie) SAC

Distance to East Anglia TWO 189 (windfarm site) and 199 (offshore cable corridor)

(km)

Marine Mammals

Site Features	Likely e	effect(s) o	f East An	glia TWC)										
	Underw	ater nois	e	Vessel	Interactio	ons	Indirect	effects o	n prey	Change quality	s to wate	r	In-comb	oination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Harbour seal <i>Phoca</i> vitulina	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

Fish

Site	Likely	effect((s) of E	ast Ang	glia TW	0															
Features		anent at loss		physi	orary cal bance		to inc	hering reased ended nent			nobilisa ntamina nents			rwater ribratior			romagn (EMF)		In-cor	nbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
River lamprey	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 54

Name of European Site: Estuaires et littoral picards (baies de Somme et d'Authie) SAC

Distance to East Anglia TWO 189 (windfarm site) and 199 (offshore cable corridor)

(km)

b) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA

Site 55

Name of European Site: Exe Estuary SPA & Ramsar

Distance to East Anglia TWO 416 (windfarm site) and 390 (offshore cable corridor)

(KIII)												
Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Migratory waterbird assemblage including as named features brent goose, dunlin, oystercatcher, blacktailed godwit, grey plover, Slavonian grebe <i>Podiceps auritus</i> , avocet		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Survey data show little or no evidence of Exe Estuary SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Exe Estuary SPA & Ramsar.





Site 56

Name of European Site: Fair Isle SPA

Distance to East Anglia TWO 830

(km)												
Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	mortality		Displace	ement/Dist	urbance	Barrier E	Effect		Cumulat combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features Arctic skua Stercorarius parasiticus, fulmar, gannet, great skua Stercorarius skua, puffin, razorbill, Arctic tern, guillemot, kittiwake, shag		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Fair Isle wren		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Fair Isle SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) Fair Isle wren is a resident Shetland subspecies that is thought never to leave the island.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Fair Isle SPA.





Site 57

Name of European Site: Falaise du Bessin Occidental SPA

Distance to East Anglia TWO 365

(KIII)												
Site Features	Likely ef	fect(s) of	East Angl	ia TWO								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumulat		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding kittiwake, herring gull, lesser black-backed gull, fulmar		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (g)	N (g)	N (g)
Nonbreeding red-throated diver		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (g)	N (g)	N (g)
Nonbreeding cormorant, shag, red- breasted merganser		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (g)	N (g)	N (g)
Nonbreeding guillemot, razorbill		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (g)	N (g)	N (g)
Nonbreeding peregrine, short-eared owl Asio flammeus		N (e)		N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (g)	N (g)	N (g)
Breeding Dartford warbler Sylvia undata		N (f)		N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)

- a) Falaise du Bessin Occidental SPA is far beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be extremely small relative to BDMPS, as these species are likely to migrate into the Atlantic rather than northwards into the North Sea in autumn, and are unlikely to pass through the North Sea in spring.
- b) Nonbreeding red-throated divers at this SPA are likely to include birds from Scandinavia and the UK, especially juveniles which winter further south than adults. Their migrations between breeding grounds and the SPA probably take most individuals along the continental coast of Europe rather than across the North Sea. Small numbers may cross the North Sea towards the UK or Icelandic breeding grounds. However, red-throated divers tend to fly low over the sea so will be at very low risk of collision. Red-throated divers strongly avoid disturbance and offshore wind farms and so may have to fly further by flying around the East Anglia TWO site rather than through the wind farm. However, in the context of a migration of over





Site 57 Name of European Site: Falaise du Bessin Occidental SPA **Distance to East Anglia TWO** 365 (km) Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/Incombination 0 D С С 0 С С 0 D D 0 D

1000km, the extra distance flown to pass an offshore wind farm represents a negligible increase in energy expenditure for the very few individuals that might be affected.

- c) Cormorants, shags and red-breasted mergansers do not normally occur at the East Anglia TWO site based on bird survey data. Furthermore, these species tend to fly low over the sea and so would be at negligible risk of collision, and do not show displacement or barrier effects. Indeed, cormorants seem to benefit from offshore wind farm structures permitting them to extend foraging range offshore, and the same may be true for shag and red-breasted merganser which may also benefit from foraging opportunities around turbine bases.
- d) Nonbreeding guillemots and razorbills fly low over the sea and so are at very low risk of collision. However, they are partially displaced from offshore wind farms and may fly around rather than through offshore wind farms. A very small proportion of the guillemots and razorbills from this SPA might migrate through the East Anglia TWO site towards breeding areas further north, but the area of foraging habitat lost to these birds if they avoid the East Anglia TWO site would be negligible in relation to the wider area of the North Sea and Channel over which they forage, and the increase in migration distance to fly around rather than through the wind farm would be negligible in relation to a migration distance of hundreds of kilometres.
- e) Peregrines in western Europe do not normally migrate, so would be extremely unlikely to move between this SPA and the East Anglia TWO site. Short-eared owls are more migratory, and sometimes cross the North Sea, but since this SPA is 445km from the East Anglia TWO site, the chances of a short-eared owl from the SPA passing through the East Anglia TWO site are extremely small.
- f) Dartford warbler is a resident species that is unlikely to move from this SPA.
- g) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Falaise du Bessin Occidental SPA.





Site 58

Name of Europea

Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant SAC

n Site:

Distance to East

131 (windfarm site) and 141 (offshore cable corridor)

to East Anglia TWO (km)

M	ari	ne l	۷	lan	n	na	ls
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Site	Likely	effect(s)	of East	Anglia T\	VO											
Features	Under	water no	oise	Vesse	I Interac	tions	Indired prey	ct effects	on	Chang water			In-con	nbination	l	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Harbour porpoise Phocoena phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
Grey seal Halichoer us grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
Harbour seal <i>Phoca</i> <i>vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	

Benthic Habitats

Site Features	Perma	nent los	S		, , ,	Temporary physical disturbance			e to diment	Re- monotonic sedimon	tamina	_		water no bration	ise	In-co	mbinati	ion
	С	O D C O D			D	С	0	D	С	0	D	С	0	D	С	0	D	





Site 58 Name of Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant SAC Europea n Site: Distance 131 (windfarm site) and 141 (offshore cable corridor) to East Anglia TWO (km) Sandbank Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν s which (b) (b (b (b) (b) (b are slightly covered by sea water all the time Mudflats Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν and (b) (b) (b) (b) (b) (b (b) (b) (b) (b) (b) (b) (b) (b) (b (b sandflats not covered by seawater at low tide Reefs Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν (b) (b

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

b) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes..





Site Name of European Site: Distance to East Anglia TWO (km)	59 Faray 826	and Ho	olm of F	aray SA	С										
Site Features		ely effect(s) of East Anglia TWO derwater noise													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the potential for LSE.	potentia	l impac	t range	of East A	nglia TV	VO and t	he exter	nt of any	effect or	n individu	als from	this site	would re	sult in n	0

Site	60											
Name of European Site:	Farne Is	lands SP	4									
Distance to East Anglia TWO (km)	442											
Site Features	Likely ef	fect(s) of E	East Anglia	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	ffect		Cumulat	ive/In-com	bination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding Arctic tern, common tern, Sandwich tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Farne Islands SPA is beyond maximum foraging range of these designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Farne Islands SPA.





Site 61

Name of European Site: Fetlar SPA

Distance to East Anglia TWO 932

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat	ive/In-com	nbination
	С	O D (0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features Arctic skua, fulmar, great skua, Arctic tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding dunlin, whimbrel <i>Numenius</i> phaeopus, red-necked phalarope <i>Phalaropus lobatus</i>		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Fetlar SPA is beyond the maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.
- b) Dunlin, whimbrel and red-necked phalarope have not been observed migrating through the East Anglia TWO site. Red-necked phalaropes from Fetlar SPA have been tracked by geolocator and migrate from Shetland to the Pacific Ocean via Iceland, Greenland and Canada, and so would not pass near to East Anglia TWO. Dunlin and whimbrel from Fetlar SPA migrate south, but are unlikely to pass through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Fetlar SPA.





Site 62

Name of European Site: Firth of Forth SPA & Ramsar

Distance to East Anglia TWO (km) 511 (windfarm site) and 501 (offshore cable corridor)

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features curlew, dunlin, goldeneye, great crested grebe, knot, lapwing, mallard Anas platyrhynchos, pinkfooted goose Anser brachyrhynchus, red-breasted merganser, ringed plover, Sandwich tern, Slavonian grebe, turnstone, wigeon, common scoter Melanitta nigra, golden plover, longtailed duck Clangula hyemalis, redshank, shelduck, bar-tailed godwit, cormorant, eider Somateria mollissima, grey plover, oystercatcher, red-throated diver, scaup, velvet scoter Melanitta fusca		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration. Therefore, proportions of these populations migrating through the East Anglia TWO site are likely to be extremely small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Firth of Forth SPA & Ramsar.





Site 63

Name of European Site: Firth of Tay & Eden Estuary SPA & Ramsar

Distance to East Anglia TWO 551 (windfarm site) and 542 (offshore cable corridor)

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features common scoter, cormorant, eider, goosander <i>Mergus merganser</i> , grey plover, long-tailed duck, redbreasted merganser, sanderling, velvet scoter, dunlin, greylag goose, redshank, oystercatcher, bar-tailed godwit, goldeneye, Icelandic blacktailed godwit <i>Limosa limosa islandica</i> , pink-footed goose		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding marsh harrier		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
Breeding little tern		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)

- a) Survey data show little or no evidence of Firth of Tay & Eden Estuary SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Marsh harrier is a migrant species. Satellite tracking suggests that marsh harriers from Scotland migrate overland to the south coast of England and over the Channel to France, rather than across the North Sea, and so are unlikely to pass through the East Anglia TWO site.





- c) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia TWO site. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Firth of Tay & Eden Estuary SPA & Ramsar.





Site 64

Name of European Site: Firth of Tay & Eden Estuary

SAC 548

Distance to East Anglia TWO

Site Features	Likely e	effect(s)	of East A	Anglia TV	VO										
	Under	water no	ise	Vesse	l interac	tions	Indired prey	ct effects	on	Chang quality	ges to wa	ater	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 65 Name of European Site: Flamborough and Filey Coast SPA

248

Distance to East Anglia TWO

Site Features	Likely 6	effect(s) of	East Angl	ia TWO								
	Collisio	n mortality	/	Displac	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-co	mbination
	С	O D (0	D	С	0	D	С	0	D
Breeding kittiwake		Y (a)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (c)	Y (a)	N (c)
Breeding gannet		Y (a)		N (d)	Y (d)	N (d)	N (e)	N (e)	N (e)	N (c)	Y (a)	N (c)
Breeding common guillemot		N (f)		N (g)	Y (h)	N (g)	N (g)	N (i)	N (g)	N (c)	Y (h)	N (c)
Breeding razorbill		N (f)		N (g)	Y (h)	N (g)	N (g)	N (i)	N (g)	N (c)	Y (h)	N (c)
Breeding puffin		N (f)		N (g)	Y (h)	N (g)	N (g)	N (i)	N (g)	N (c)	Y (h)	N (c)

- Band model estimates of collision mortality indicate that LSE cannot be ruled out at the Screening stage.
- Kittiwakes are not considered to be at risk of disturbance and displacement or barrier effects at offshore wind farms therefore LSE can be ruled out.
- The predicted effect attributable to the proposed East Anglia TWO project is so small that it would not significantly contribute to or alter the overall incombination assessment for these features at Flamborough and Filey Coast SPA.
- d) Flamborough and Filey Coast SPA is 239km from East Anglia TWO. Thaxter et al. (2012) report a mean foraging range of breeding gannets as 92.5km, and a maximum recorded distance of 590km. East Anglia TWO is therefore considerably beyond the mean foraging range of breeding gannets, but within their maximum range. Breeding gannets from Flamborough & Filey Coast SPA may therefore be affected by displacement. Searle et al. (2014) found that even for offshore wind farms considerably closer to a gannet breeding colony than under consideration here, impacts of displacement were negligible for this species because of its very long foraging range and large area used for foraging. Similarly, impacts of displacement during migration are considered likely to be negligible. Nonetheless, Natural England consider that an LSE cannot be ruled out at the Screening stage.

Information to Support AA – Screening Matrices



Site 65

Name of European Site: Flamborough and Filey Coast SPA

Distance to East Anglia TWO 248

- e) Gannets are not considered at risk of barrier effects due to their wide ranging habits (see (d)), and migrating gannets cover very large distances, extending from the North Sea to West Africa, so that slight local effects would be negligible in the context of their large migrations and area use, therefore LSE can be ruled out.
- f) Common guillemots, razorbills and puffins tend to fly low over the sea so have a very low risk of collision mortality, therefore LSE can be ruled out.
- g) Construction and decommissioning impacts are temporary and localised therefore LSE can be ruled out.
- h) Flamborough and Filey Coast SPA is 216km from East Anglia TWO. Thaxter et al. (2012) report a mean foraging range of breeding common guillemots as 37.8km, and a maximum recorded distance of 135km. Thaxter et al. (2012) report a mean foraging range of breeding puffin as 4km, and a maximum recorded distance of 95km. Thaxter et al. (2012) report a mean foraging range of breeding puffin as 4km, and a maximum recorded distance of 200km. East Anglia TWO is therefore considerably beyond the normal foraging range of these species from Flamborough and Filey Coast SPA. It is therefore unlikely that any breeding adults from Flamborough and Filey Coast SPA will be present at East Anglia TWO during the breeding season. During the nonbreeding season, birds from Flamborough and Filey Coast SPA are likely to be mixed with the large BDMPS populations of these species so that apportioning of the impact of the low level of displacement mortality generates a negligible impact to Flamborough and Filey Coast SPA. Nonetheless, Natural England consider that an LSE cannot be ruled out at the Screening stage.
- i) Since East Anglia TWO is beyond the normal foraging range of breeding common guillemots, razorbills and puffins from Flamborough and Filey Coast SPA, there will be no breeding season barrier impact for those populations. During the nonbreeding period birds from Flamborough and Filey Coast SPA are likely to be mixed with the large BDMPS populations of these species so that apportioning of the impact of the low level of displacement to this very large BDMPS population apportions a negligible impact to Flamborough and Filey Coast SPA.





Site 66 Flamborough Head SAC Name of European Site: 233 (offshore cable corridor) **Distance to East Anglia TWO** (km) Site Likely effect(s) of East Anglia TWO Features Permanent loss Temporary physical Smothering due to Re- mobilisation of Underwater noise In-combination disturbance increased contaminated and vibration suspended sediments sediment С 0 С 0 С 0 0 С 0 0 D D С D D D D N (a) Submerged or partially submerged sea caves

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE.





Site 67 Name of European Site: Forth Islands SPA **Distance to East Anglia TWO** 519 (km) Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 D С 0 С С 0 D 0 D D Breeding seabird assemblage including N (a) N (b) N (b) N (b) as named features gannet, kittiwake, lesser black-backed gull, roseate tern, Sandwich tern, guillemot, razorbill, fulmar, common tern, Arctic tern, cormorant, herring gull, puffin, shag

- a) Forth Islands SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Forth Islands SPA.





Site	68											
Name of European Site:	Foula SPA											
Distance to East Anglia TWO (km)	902											
Site Features	Likely ef	fect(s) of	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features Arctic tern, fulmar, guillemot, razorbill, red-throated diver, Arctic skua, kittiwake, shag, Leach's storm-petrel Oceanodroma leucorhoa, great skua, puffin		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Foula SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Foula SPA.

oystercatcher, bar-tailed godwit, grey

plover, avocet, redshank

Nonbreeding hen harrier

Sandwich tern

Breeding ringed plover, avocet

Breeding little tern, common tern,

Site



69

N (b)

N (c)

N (d)



Name of European Site: **Foulness SPA and Ramsar** Distance to East Anglia TWO (km) 85 (windfarm site) and 69 (offshore cable corridor) Site Features Likely effect(s) of East Anglia TWO Collision mortality Displacement/Disturbance Cumulative/In-combination **Barrier Effect** C 0 D С \circ D 0 D N (a) Wintering and passage waterbird N (a) N (a) N (a) N (e) N (e) N (a) N (a) N (a) N (e) assemblage including as named features brent goose, knot,

a) Survey data show little or no evidence of Foulness SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration.

N (b)

N (c)

N (d)

N (e)

N (c)

N (d)

N (e)

N (c)

N (d)

N (e)

N (c)

N (d)

N (b)

N (c)

N (d)

- b) Survey data show no evidence of hen harrier occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration, as the species is likely to migrate overland rather than over sea where the option is available.
- c) Ringed plover and avocet have not been observed during bird site-specific surveys. It is highly unlikely that these birds would migrate through the East Anglia TWO site as their migration is likely to take a coastal route and cross sea at narrow points such as The English Channel. If they did migrate through the East Anglia TWO site their flight height is likely not to be at collision risk height.





Site 69

Name of European Site: Foulness SPA and Ramsar

Distance to East Anglia TWO (km) 85 (windfarm site) and 69 (offshore cable corridor)

- d) Little tern, common tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km and 54km respectively, so there is no connectivity between the SPA and East Anglia TWO site. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded.
- e) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Foulness SPA and Ramsar.





Site	0												
Name of European Site:	owlsheug	gh SPA											
Distance to East Anglia TWO (km)	80												
Site Features	Likely ef	fect(s) of	East Angli	a TWO									
	Collision	Likely effect(s) of East Anglia TWO Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination											
	С	0	D	С	0	D	С	0	D	С	0	D	
Breeding seabird assemblage including as named features fulmar, guillemot, kittiwake, razorbill, herring gull		N (a)		N (a)	N (b)	N (b)	N (b)						

- a) Fowlsheugh SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Fowlsheugh SPA.





Site 71

Name of European Site: **Frisian Front SPA**

Distance to East Anglia TWO

183

Site Features	Likely ef	fect(s) of	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	ffect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Nonbreeding common guillemot, great skua, great black-backed gull, lesser black-backed gull		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Migrations of birds from this pSPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration relative to the size of BDMPS regional populations.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Frisian Front pSPA.





Site	72													
Name of European Site:	Gibraltar F	Gibraltar Point SPA and Ramsar												
Distance to East Anglia TWO (km)	149	49												
Site Features	Likely e	Likely effect(s) of East Anglia TWO												
	Collision mortality			Displacement/Disturbance			Barrier E	Effect		Cumulative/In-combination				
	С	0	D	С	0	D	С	0	D	С	0	D		
Nonbreeding sanderling, bar-tailed godwit, grey plover		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)		
Breeding little tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		

- a) Survey data show no evidence of Gibraltar Point SPA features (sanderling, bar-tailed godwit, grey plover) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration.
- b) Breeding little tern has a maximum foraging range of 11km (Thaxter et al. 2012) from colonies, so would have no connectivity with the East Anglia TWO site. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Gibraltar Point SPA and Ramsar.





Site	73													
Name of European Site:	Great Yarı	Great Yarmouth and North Denes SPA												
Distance to East Anglia TWO (km)	43 (windfa	3 (windfarm site) and 34 (offshore cable corridor)												
Site Features	Likely effect(s) of East Anglia TWO													
	Collision	n mortality		Displacement/Disturbance			Barrier Effect			Cumulative/In-combination				
	С	0	D	С	0	D	С	0	D	С	0	D		
Breeding little tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)		

- a) Great Yarmouth & North Denes SPA is beyond the maximum foraging range of little tern (11km) and foraging tends to be coastal so has no breeding season connectivity. Proportions of this population migrating through the East Anglia TWO site are likely to be small as the species is thought to remain close to shore during much of its migration through UK waters.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Great Yarmouth & North Denes SPA.

Nonbreeding little gull

Nonbreeding common scoter





Site 74 Name of European Site: **Greater Wash SPA** Distance to East Anglia TWO (km) 38 (windfarm site) and 24 (offshore cable corridor) Site Features Likely effect(s) of East Anglia TWO Collision mortality Displacement/Disturbance Cumulative/In-combination **Barrier Effect** C 0 D С 0 D 0 D N (a) Breeding seabirds (little tern, common N (a) tern, Sandwich tern) N (b) Y (c) Y (c) Y (i) Nonbreeding red-throated diver Y (i) N (d) N (b) N (b) N (b) N (h)

N (f)

N (g)

a) Little tern, common tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km and 54km respectively, which suggests potential connectivity between the SPA and the East Anglia TWO site. However, the tern colonies are at locations along the Norfolk coast which are beyond these foraging distances from the East Anglia TWO site. Therefore, connectivity between the SPA and East Anglia TWO site is ruled out on the basis of distance. Furthermore, these species tend to forage in coastal waters rather than offshore. Hence, collision risk, displacement and barrier effects can be excluded.

N (f)

N (q)

N (f)

N (q)

N (f)

N (g)

N (f)

N (g)

N (f)

N (g)

N (h)

N (h)

Y (e)

N (h)

b) Red-throated divers fly close to the sea surface and are therefore at extremely low risk of collisions or barrier effects.

Y (e)

N (g)

- c) LSE cannot be ruled out at screening for impacts of Displacement/Disturbance to nonbreeding red-throated divers as a result of construction work (specifically for export cable laying operations through part of the Greater Wash SPA).
- d) Displacement/Disturbance of red-throated diver during operation and decommissioning is considered negligible as the increase in vessel traffic within the SPA due to East Anglia TWO will be negligible compared to the current baseline.
- e) There is potential for little gull connectivity between the SPA and the East Anglia TWO site, therefore LSE cannot be ruled out at screening for collision risk impacts to nonbreeding little gull.

N (h)

N (h)





Site 74

Name of European Site: Greater Wash SPA

Distance to East Anglia TWO (km) 38 (windfarm site) and 24 (offshore cable corridor)

- f) Displacement of little gulls by offshore wind farms appears to be negligible**, indicating no LSE for this SPA feature as a consequence of displacement or barrier effects.
- g) Surveys found no common scoters in the East Anglia TWO site since this species favours waters <20m in depth. Common scoter was also only present at very low densities along the export cable route, therefore no LSE for this SPA feature is predicted.
- h) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Greater Wash SPA.
- i) Following advice from Natural England it is considered that Operations and Maintenance vessels may disturb red-throated divers whilst transiting through the SPA therefore an LSE cannot be screened out.

potential for LSE.





Site	75														
Name of European Site:	Gule F	Rev SCI													
Distance to East Anglia TWO (km)	659														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel Interactions			Indirect effects on prey			Changes to water quality			In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impact	t range	of East A	nglia TV	VO and t	he exter	nt of any	effect o	n individu	als from	this site	would re	sult in n	0





Site	76														
Name of European Site:	Gullm	arsfjord	den SA0												
Distance to East Anglia TWO (km)	877														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	/essel Interactions			t effects	on	Change quality	es to wa	ter	In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the potential for LSE.	potentia	l impact	range o	of East A	nglia TV	VO and t	he exter	nt of any	effect or	n individu	als from	this site	would re	sult in n	0

5.3.4 Information to Support AA – Screening Matrices





Site 77

Name of European Site: Haisborough, Hammond and Winterton SAC

Distance to East Anglia TWO

37 (windfarm site) and 30 (offshore cable corridor)

(km)

Site	Likely 6	effect(s)	of East	Anglia T\	VO													
Features		nent troductio ediment	n of	Tempo	rary phy ance	/sical		ering du sed susp ent		Re- mo		n of	Undervand vik	water no oration	oise	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)		Y (a)	Y (a)		Y (a)	Y (a)	Y (a)	Y (a)
Reefs	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)		Y (a)	Y (a)		Y (a)	Y (a)	Y (a)	Y (a)

a) Within range of theoretical indirect effect (sediment deposition) but effect negligible. Features are primarily sedimentary.





Site	78														
Name of European Site:	Hamb	urgisch	es Wat	tenmeer	SCI										
Distance to East Anglia TWO (km)	444														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination															
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	79														
Name of European Site:	Heigo	land mi	t Helgo	lander F	elssock	el SAC									
Distance to East Anglia TWO (km)	428														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	0													
Name of European Site:	dermanes	s, Saxa V	ord and V	alla Field	SPA									
Distance to East Anglia TWO (km)	54													
Site Features	Likely ef	Likely effect(s) of East Anglia TWO												
	Collision	Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination												
	С	0	D	С	0	D	С	0	D	С	0	D		
Breeding seabird assemblage including as named features gannet, guillemot, red-throated diver, puffin, fulmar, kittiwake, great skua, shag	ing N (a) N (a) N (a) N (a) N (a) N (b) N (b) N											N (b)		

- a) Hermaness, Saxa Vord & Valla Field SPA is beyond the maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Hermaness, Saxa Vord & Valla Field SPA.

potential for LSE.





Site	81															
Name of European Site:	Hesse	lø med	omligg	ende ste	enrev S <i>i</i>	AC										
Distance to East Anglia TWO (km)	976															
Site Features	Likely	ely effect(s) of East Anglia TWO derwater noise														
	Under	nderwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination														
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
a) The distance between the	potentia	l impact	range	of East A	nglia TV	VO and t	he exter	nt of any	effect or	n individu	als from	this site	would re	sult in n	0	

^{5.3.4} Information to Support AA – Screening Matrices





Site Name of European Site:	82 Hirsho	olmene,	havet	vest her	for og E	llinge Å'	s udløb	SAC							
Distance to East Anglia TWO (km)	813														
Site Features	Likely	ely effect(s) of East Anglia TWO													
	Underwater noise														
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	83														
Name of European Site:	Hornsea M	ere SPA													
Distance to East Anglia TWO (km)	235														
Site Features	Likely ef	Likely effect(s) of East Anglia TWO													
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-com	nbination			
	С	0	D	С	0	D	С	0	D	С	0	D			
Nonbreeding gadwall, mute swan		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)			

- a) Survey data show no evidence of Hornsea Mere SPA features (gadwall, mute swan) occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Hornsea Mere SPA.





Site 84

Name of European Site: Hoy SPA

Distance to East Anglia TWO (km) 793

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier I	Effect		Cumulat	tive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features Arctic skua, great black-backed gull, guillemot, kittiwake, red-throated diver, fulmar, puffin, great skua		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding peregrine		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Hoy SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.
- b) Peregrines breeding in the UK normally remain close to their breeding areas throughout the year, and are very unlikely to migrate offshore in the UK.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Hoy SPA.





Site					85		_														
Name of Eur	opean	Site:						ry SAC													
Distance to	East A	nglia	TWO (km)	17	8 (win	dfarm	site) ar	nd 164	(cable	corric	lor)									
Marine Mam	mals																				
Site Features	5		Likely e	ffect(s)	of East	Anglia	TWO														
			Underw	ater nois	se		sturbaı	nteraction nce at s			irect e	ffects o	n prey	Cha qua	_	o water		In-co	mbinat	ion	
			С	0	D	С		0	D	С		0	D	С	0		D	С	0	1	D
Grey seal Ha						Υ	(a)	Y (a)	Y (a)	Υ (a)	Y (a)	Y (a)	Y (a	1)		Y (a)	Y (a)	Υ ((a)	Y (a)
Fish																					
Site	Likely	effec	t(s) of E	ast Ang	lia TW	0															
Features	Perm			Temp physic disturb	al		to in	thering creased ended nent		_	nobilis ntamin nents			rwater vibratio			romagn (EMF)		In-coi	mbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sea Lamprey Petromyzon marinus	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)
River lamprey Lampetra fluvialitis	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)





Site 85

Name of European Site: Humber Estuary SAC

Distance to East Anglia TWO (km) 178 (windfarm site) and 164 (cable corridor)

Benthic habitats

Site Features	Perm	nanent	loss	phys	porary ical rbance		to inc	hering creased ended nent			nobilisa ntamina nents			rwater /ibration		In-coi	mbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Estuaries	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Mudflats and sandflats not covered by seawater at low tide	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Sandbanks which are slightly covered by sea water all the time	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Coastal lagoons	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)

- a) Potential effects from underwater noise; vessel interactions; changes to water quality; changes to prey resources; and disturbance at seal haul-out sites cannot be ruled out.
- b) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- c) The distance between the offshore project area and the designated site is beyond the range of any potential LSE





Site 86 Name of European Site: **Humber Estuary SPA and Ramsar** 178 (windfarm site) and 164 (offshore cable corridor) Distance to East Anglia TWO (km) Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 D С С 0 0 D 0 D Wintering and passage waterbird N (a) N (g) N (g) N (g) assemblage including as named features teal, wigeon, mallard, turnstone, pochard, scaup, bittern, brent goose, goldeneye, sanderling, dunlin, knot, ringed plover, oystercatcher, bar-tailed godwit, blacktailed godwit, curlew, golden plover, grey plover, avocet, shelduck, redshank, lapwing, whimbrel, ruff, greenshank Tringa nebularia Nonbreeding hen harrier N (b) N (g) N (g) N (g) Breeding bittern N (c) N (g) N (g) N (g) Breeding marsh harrier N (d) Breeding avocet N (e) N (g) N (g) N (g) Breeding little tern N (f) N (f)





Site 86

Name of European Site: Humber Estuary SPA and Ramsar

Distance to East Anglia TWO (km) 178 (windfarm site) and 164 (offshore cable corridor)

- a) Survey data show little or no evidence of Humber Estuary SPA features occurring in the East Anglia TWO sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration.
- b) Survey data show no evidence of Humber Estuary SPA feature hen harrier occurring in the East Anglia TWO sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration as UK birds are likely to migrate overland rather than over the sea where possible.
- c) Bittern has not been observed during bird surveys at East Anglia TWO, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration.
- d) Marsh harrier is a migrant species. Satellite tracking suggests that marsh harriers migrate overland to the south coast of England and over the Channel to France, rather than across the North Sea.
- e) Avocet has not been observed during bird site specific surveys. It is highly unlikely that these birds would migrate through the East Anglia TWO site as their migration is likely to take a coastal route and cross sea at narrow points such as The English Channel. If they did migrate through the East Anglia TWO site their flight height is likely not to be at collision risk height.
- f) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with East Anglia TWO. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- g) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Humber Estuary SPA and Ramsar.





Site Name of European Site:	87 Hund (und Paa	apsand	SCI											
Distance to East Anglia TWO (km)	339														
Site Features	Likely 6	effect(s)	of East	t Anglia	TWO										
	Underv	vater no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of the proposed project and the site is beyond that of potential for direct or indirect effects.





Site	88											
Name of European Site:	Imperial Doo	k Lock, L	eith SPA.									
Distance to East Anglia TWO (km)	535											
Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding common tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

a) SPA is far beyond maximum foraging range of designated seabird species (common tern) so has no breeding season connectivity. Proportions of these populations migrating through East Anglia TWO are small relative to BDMPS.

b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Imperial Dock Lock SPA.





Site 89 Name of European Site: Inner Dowsing, Race Bank and North Ridge SCI **Distance to East Anglia TWO** 118 (windfarm site) and 109 (cable corridor) (km) Site Likely effect(s) of East Anglia TWO Features Smothering due to Re- mobilisation of In-combination Temporary physical Permanent loss Underwater noise disturbance increased and vibration contaminated suspended sediments sediment С С С 0 D 0 D С 0 D С O D 0 D С 0 D N (a) Sandbanks which are slightly covered by sea water all the time N (a) Reefs

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE.





Site 90

Name of European Site: Inner Moray Firth SPA & Ramsar

Distance to East Anglia TWO 703 (windfarm site) and 694 (cable corridor)

(km)

Site Features	Likely ef	fect(s) of	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumula	tive/In-cor	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features bar-tailed godwit, curlew, goldeneye, greylag goose, redshank, wigeon, goosander, teal, red-breasted merganser, cormorant, oystercatcher, scaup		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding osprey		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
Breeding common tern		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (d)	N (d)	N (d)

- a) Survey data show little or no evidence of Inner Moray Firth SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA and Ramsar are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Osprey has not been observed in the East Anglia TWO site, and it is extremely unlikely that any ospreys from the Inner Moray Firth SPA migrate through the East Anglia TWO site.
- c) Inner Moray Firth SPA is far beyond maximum foraging range of common tern so has no breeding season connectivity. The proportion of the population migrating through the East Anglia TWO site is likely to be extremely small relative to BDMPS.
- d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Inner Moray Firth SPA & Ramsar.





Site Name of European Site: Distance to East Anglia TWO (km)	91 Isle of 527	May S <i>i</i>	/C												
Site Features		effect(s) water no		t Anglia [*] Vessel	TWO Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	92														
Name of European Site:	Klaverba	nk SCI													
Distance to East Anglia TWO (km)	177														
Site Features	Likely effe	ct(s) of Ea	st Anglia T	WO											
	Underwate	er noise		Vesse	el Intera	ctions	Indired prey	ct effect	s on	Chang quality	es to wa	ater	In-cor	nbinatio	n
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site:	93 Koste	rfjorder	n-Väder	öfjorder	sAC										
Distance to East Anglia TWO (km)	889														
Site Features	Likely	effect(s	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indired	t effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of the proposed project and the site is beyond that of potential for direct or indirect effects.





Site Name of European Site:	94 Kungs	sbackat	jorden	SAC											
Distance to East Anglia TWO (km)	877														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel	Interact	ions	Indired prey	t effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	limpac	t range	of the pro	posed p	roject ar	nd the si	te is bey	ond that	of poten	tial for di	rect or ir	direct ef	fects.	

Site Name of European Site:	95 Küste	n- und	Dünenla	andscha	ften Am	rums S	AC								
Distance to East Anglia TWO (km)	482														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel	Interact	ions	Indired prey	ct effects	on	Chang quality	es to wa	ater	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal <i>Halichoerus grypus</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)





Site 96 Name of European Site: Lindisfarne SPA and Ramsar Distance to East Anglia TWO (km) 446 (windfarm site) and 437 (offshore cable corridor) Likely effect(s) of East Anglia TWO Site Features Displacement/Disturbance Cumulative/In-combination Collision mortality Barrier Effect C 0 D С C 0 D 0 D C \circ D N (a) N (a) Wintering and passage waterbird N (a) N (a) N (a) N (a) N (a) N (c) N (c) N (c) assemblage including as named features wigeon, greylag goose, brent goose, sanderling, dunlin, ringed plover, goldeneye, whooper swan, black-tailed godwit, common scoter, red-breasted merganser, golden plover, grey plover, eider, shelduck, redshank Breeding little tern, roseate tern N (b) N (b)

- a) Survey data show little or no evidence of SPA features occurring in East Anglia TWO and migrations of birds from this SPA are likely to result in negligible numbers passing through the site during migration.
- b) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with East Anglia TWO. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site. Breeding roseate tern has a maximum foraging range of 30km from colonies, so would have no connectivity with East Anglia TWO. Migrating roseate terns are unlikely to pass through the East Anglia TWO site as their migration tends to be coastal.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Lindisfarne SPA and Ramsar.





Site 97

Name of European Site: **Littoral Seino-Marin SPA**

Distance to East Anglia TWO 229 (km)	•											
Site Features	Likely ef	fect(s) of	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-co	mbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabirds including fulmar, shag, gannet, herring gull, great blackbacked gull, kittiwake		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (f)	N (f)	N (f)
Nonbreeding winter and passage seabird assemblage including as named features red-throated diver, black-throated diver, great crested grebe, fulmar, gannet, cormorant, shag, pomarine skua Stercorarius pomarinus, great skua, Mediterranean gull Larus melanocephalus, little gull, lesser black-backed gull, herring gull, great black-backed gull, kittiwake, Sandwich tern, common tern, guillemot, razorbill		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (f)	N (f)	N (f)
Nonbreeding little egret, spoonbill Platalea leucorodia, honey buzzard Pernis apivorus, hen harrier, merlin Falco columbarius, peregrine, avocet		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)
Breeding peregrine		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)





Site 97 Name of European Site: **Littoral Seino-Marin SPA Distance to East Anglia TWO** 229 (km) N (e) Nonbreeding woodlark Lullula arborea N (e) N (e)

- a) East Anglia TWO is within the theoretical maximum foraging range of breeding gannets from this SPA but tracking data show that breeding gannets from the SPA do not reach East Anglia TWO. The SPA is far beyond maximum foraging range of other designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through East Anglia TWO are likely to be extremely small relative to BDMPS.
- b) Proportions of these populations migrating through the East Anglia TWO site are likely to be extremely small relative to BDMPS.
- c) None of these species has been recorded during bird surveys at the East Anglia TWO site. It is unlikely that birds from the SPA will migrate through the East Anglia TWO site, as these species are generally scarce migrants in the UK, and their migrations tend to be coastal rather than over open sea.
- d) Breeding peregrines in western Europe tend to remain close to their breeding site throughout the year so it is extremely unlikely that any from the SPA would reach East Anglia TWO site.
- e) Woodlark is a very scarce migrant to the UK, so it is very unlikely that individuals from the SPA would reach the East Anglia TWO site.
- f) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Littoral Seino-Marin SPA.





Site 98

Name of European Site: Loch of Strathbeg SPA & Ramsar

Distance to East Anglia TWO

642

(km)

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features greylag goose, pink-footed goose, teal, Svalbard barnacle goose <i>Branta leucopsis</i> , whooper swan		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding Sandwich tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (c)	N (c)	N (c)

- a) Survey data show little or no evidence of Loch of Strathbeg SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Loch of Strathbeg SPA is far beyond maximum foraging range of Sandwich tern (54km, Thaxter et al. 2012) so has no breeding season connectivity. Proportion of the population migrating through the East Anglia TWO site is likely to be extremely small relative to BDMPS.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Loch of Strathbeg SPA & Ramsar.





Site Name of European Site: Distance to East Anglia TWO	99 Løgstø 679	ør Bred	ning, V	ejlerne o	g Bulbj	erg SAC	:								
(km) Site Features	_	effect(s) water no		t Anglia T	ΓWO Interact	ions	Indirec	t effects	on	Change quality	es to wat	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site:	100 Lovns	Bredni	ng, Hja	rbæk Fj	ord og S	skals, Si	mested	og Nørr	e Ådal, S	Skravad	Bæk SA	C			
Distance to East Anglia TWO (km)	676														
Site Features	Likely	effect(s)	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal <i>Phoca vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site:	101 Malmö	ofjord S	AC												
Distance to East Anglia TWO (km)	882														
Site Features		effect(s water no		t Anglia Vessel	TWO Interact	ions		t effects	on		es to wa	ter	In-com	bination	
							prey			quality					
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

potential for LSE.





Site Name of European Site: Distance to East Anglia TWO (km)	102 Marai: 378	s du Co	tentin e	et du Bes	ssin - Ba	aie des \	/eys SA	.c							
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	e potentia	ıl impac	t range	of East A	nglia TV	VO and t	he exte	nt of any	effect or	n individu	als from	this site	would re	esult in n	0





Site 103

Name of European Site: Margate and Long Sands SCI

Distance to East Anglia TWO 39 (windfarm site) and 37 (cable corridor)

(km)

Site Features	Likely 6	Likely effect(s) of East Anglia TWO																
	Permanent loss			Temporary physical disturbance			Smothering due to increased suspended sediment			Re- mobilisation of contaminated sediments			Underwater noise and vibration			In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE.





Site 104 Name of European Site: **Marwick Head SPA** Distance to East Anglia TWO (km) 829 Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 D С С 0 0 D 0 D Breeding seabird assemblage including N (a) N (a) N (a) N (a) N (a) N (a) N (b) N (b) N (b) N (a) as named features guillemot and kittiwake

- a) Marwick Head SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Marwick Head SPA.





Site Name of European Site:	105 Måses	kär SA	С												
Distance to East Anglia TWO (km)	871														
Site Features Likely effect(s) of East Anglia TWO															
	Underwater noise			Vessel Interactions			Indirect effects on prey			Changes to water quality			In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	106													
Name of European Site:	Medway Estuary & Marshes SPA and Ramsar													
Distance to East Anglia TWO (km)	118 (wir	118 (windfarm site) and 101 (offshore cable corridor)												
Site Features	Likely effect(s) of East Anglia TWO													
	Collision mortality			Displace	ment/Dist	urbance	Barrier E	Effect		Cumulative/In-combination				
	С	0	D	С	0	D	С	0	D	С	0	D		
Wintering and passage waterbird assemblage including as named features pintail, shoveler, teal, wigeon, turnstone, brent goose, dunlin, knot, ringed plover Bewick's swan, oystercatcher, black-tailed godwit, curlew, grey plover, great crested grebe, avocet, shelduck, greenshank, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)		
Breeding avocet		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		
Breeding little tern, common tern		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)		

- a) Survey data show little or no evidence of Medway Estuary & Marshes SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Avocet has not been observed during bird site-specific surveys. It is highly unlikely that these birds would migrate through the East Anglia TWO site as their migration is likely to take a coastal route and cross sea at narrow points such as The English Channel. If they did migrate through the East Anglia TWO site their flight height is likely not to be at collision risk height.
- c) Breeding little tern has a maximum foraging range of 11km from colonies (Thaxter et al. 2012), so would have no connectivity with East Anglia TWO. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site. Breeding common tern has a maximum foraging range of 30km from colonies (Thaxter et al.





Site 106

Name of European Site: Medway Estuary & Marshes SPA and Ramsar

2012), so would have no connectivity with East Anglia TWO. Migrating common terns are unlikely to pass through the East Anglia TWO site as their migration tends to be coastal where that is an option.

d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Medway Estuary & Marshes SPA and Ramsar.

Site	107												
Name of European Site:	Minsmer	e - Walbe	rswick SI	PA and Ra	msar								
Distance to East Anglia TWO (km)	34 (wind	34 (windfarm site) and 2 (cable corridor)											
Site Features	Likely effect(s) of East Anglia TWO												
	Collision mortality			Displace	ment/Distu	urbance	Barrier E	ffect		Cumulative/In-combination			
	С	0	D	С	0	D	С	0	D	С	0	D	
Wintering shoveler, gadwall, white-fronted goose		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (g)	N (g)	N (g)	
Nonbreeding hen harrier		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (g)	N (g)	N (g)	
Breeding shoveler, teal, gadwall, bittern, avocet		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (g)	N (g)	N (g)	
Breeding nightjar Caprimulgus europaeus		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (g)	N (g)	N (g)	
Breeding marsh harrier		N (e)		N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	
Breeding little tern		N (f)		N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	

Information to Support AA – Screening Matrices



Site 107

Name of European Site: Minsmere - Walberswick SPA and Ramsar

Distance to East Anglia TWO 34 (windfarm site) and 2 (cable corridor)

(km)

- a) Survey data show no evidence of Minsmere-Walberswick SPA features shoveler, gadwall or white-fronted goose occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Survey data show no evidence of hen harrier occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site as UK birds are likely to migrate overland rather than over the sea where possible.
- c) Survey data show no evidence of Minsmere-Walberswick SPA features shoveler, teal, gadwall, bittern or avocet occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- d) Survey data show no evidence of nightjar occurring in the East Anglia TWO OWF sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site as UK birds are likely to migrate overland rather than over the sea where possible and make short sea crossings from southern England to France.
- e) Marsh harrier is a migrant species. Satellite tracking suggests that marsh harriers migrate overland to the south coast of England and over the Channel to France, rather than across the North Sea.
- f) Breeding little tern has a maximum foraging range of 11km from colonies (Thaxter et al. 2012), so would have no connectivity with East Anglia TWO. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- g) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Minsmere-Walberswick SPA and Ramsar.





Site	108	8												
Name of European Site:	Мс	ntrose Basin SPA & Ramsar												
Distance to East Anglia TWO (km)	572													
Site Features	Likely effect(s) of East Anglia TWO													
		llision ortality		Displacement/Disturbance			Barrier Effect			Cumulative/In-combination				
	С	0	D	С	0	D	С	0	D	С	0	D		
Wintering and passage waterbird assemblage including as named features dunlin, eider, knot, shelduck, wigeon, pink-footed goose, greylag goose, redshank, oystercatcher		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)		

a) Survey data show little or no evidence of Montrose Basin SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.

b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Montrose Basin SPA and Ramsar.





Site 109

Name of European Site: Moray and Nairn Coast SPA & Ramsar

Distance to East Anglia TWO 679

(km)

(All)													
Site Features	Likely effect(s) of East Anglia TWO												
	Collision mortality			Displace	ement/Dist	urbance	Barrier E	Effect		Cumulative/In-combination			
	С	0	D	С	0	D	С	0	D	С	0	D	
Wintering and passage waterbird assemblage including as named features common scoter, long-tailed duck, oystercatcher, bar-tailed godwit, wigeon, pink-footed goose, redbreasted merganser, redshank, velvet scoter, greylag goose, dunlin		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)	
Breeding osprey		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	

- a) Survey data show little or no evidence of Moray & Nairn Coast SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Osprey has not been observed in the East Anglia TWO site, and it is improbable that any ospreys from the SPA migrate through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Moray & Nairn Coast SPA and Ramsar.





Site 110

Name of European Site: Mousa SPA

Distance to East Anglia TWO 883

(km)													
Site Features	Likely ef	fect(s) of I	East Angli	a TWO									
	Collision	Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combin											
	С	0	D	С	0	D	С	0	D	С	0	D	
Breeding Arctic tern		N (a)		N (a)	N (c)	N (c)	N (c)						
Breeding European storm-petrel Hydrobates pelagicus		N (b)		N (b)									

- a) Mousa SPA is beyond maximum foraging range of Arctic tern (30km, Thaxter et al. 2012) so has no breeding season connectivity. The proportion of the population migrating through the East Anglia TWO site is likely to be extremely small relative to BDMPS.
- b) European storm-petrels were not observed in the East Anglia TWO site, and are rarely seen anywhere in the southern North Sea, so evidence suggests that this species migrates from its breeding site on Mousa into the North Atlantic and not normally through the North Sea.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Mousa SPA.





Site Name of European Site: Distance to East Anglia TWO (km)	111 Mousa 878	SAC													
Site Features	Likely	ely effect(s) of East Anglia TWO													
	Under	vater no	oise	Vessel	Interact	ions	Indirec	t effects	on		es to wat	ter	In-com	bination	
							prey			quality					
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site: Distance to East Anglia TWO (km)	112 Natio 329	nalpark	Nieders	sächsisc	ched Wa	ttenmee	r SAC								
Site Features		kely effect(s) of East Anglia TWO nderwater noise Vessel Interactions Indirect effects on quality prey quality													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 113 Nibe Bredning, Halkær Ådal og Sønderup Ådal SAC Name of European Site: 682 **Distance to East Anglia TWO** (km) Likely effect(s) of East Anglia TWO Site Features In-combination Underwater noise **Vessel Interactions** Indirect effects on Changes to water quality prey С 0 D С 0 С 0 D С 0 D C 0 D D Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

Site Name of European Site: Distance to East Anglia TWO (km)	114 Niding 883	en SAC	;												
Site Features		ly effect(s) of East Anglia TWO erwater noise													
	С	0	D	С	0	D	prey C	0	D	quality C	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 115

Name of European Site: Noordzeekustzone SAC

Distance to East Anglia TWO

163

(km)

	ne I		

Site Features	Likely 6	effect(s)	of East Ar	nglia TWC)										
	Underv	water nois	se		Interaction ance at s		Indirect	effects o	n prey	Change quality	s to wate	er	In-comI	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Grey seal	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Harbour seal	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

Fish

Site	Likely	effect(s) of Ea	ast Ang	lia TW0)															
Features	Perma	anent h	nabitat	Temp physic distur	cal		Smoth increa suspe sedim	ended	due to		nobilisa ntamina nents			water i			omagn (EMF)	etic	In-cor	nbinatio	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sea Lamprey	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)
Allis Shad	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)
Twaite Shad	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)





Site 115

Name of European Site: Noordzeekustzone SAC

Distance to East Anglia TWO

163

(km)

Benthic Habitats

Site Features	Perma	anent l	oss	Temp physic distur							obilisat Itamina ents			rwater ibration		In-cor	nbinatio	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)
Mudflats and sandflats not covered by seawater at low tide	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)

- a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- b) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA
- c) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.

Information to Support AA – Screening Matrices



Site 116 Nordre älvs estuarium SAC Name of European Site: 850 **Distance to East Anglia TWO** (km) Site Features Likely effect(s) of East Anglia TWO Indirect effects on Underwater noise **Vessel Interactions** Changes to water In-combination quality prey С С 0 С С 0 0 C 0 0 D D D Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

Site Name of European Site: Distance to East Anglia TWO (km)	117 Nordv 975	ästra S	kånes h	navsomr	åde SA(:									
Site Features	Likely	kely effect(s) of East Anglia TWO													
	Under	lerwater noise Vessel Interactions Indirect effects on Changes to water In-combination													
							prey			quality					
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no

potential for LSE.





Site	118												
Name of European Site:	North Ca	ithness C	liffs SPA										
Distance to East Anglia TWO (km)	769												
Site Features	Likely ef	fect(s) of	East Angli	a TWO									
	Collision	ollision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination											
	С	0	D	С	0	D	С	0	D	С	0	D	
Breeding seabird assemblage including as named features fulmar, guillemot, kittiwake, razorbill, puffin		N (a)		N (a)	N (c)	N (c)	N (c)						
Breeding peregrine		N (b)		N (b)									

- a) North Caithness Cliffs SPA is far beyond the maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.
- b) Peregrines breeding in the UK normally remain close to their breeding areas throughout the year, and are very unlikely to migrate offshore from the UK.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at North Caithness Cliffs SPA.





Site	119											
Name of European Site:	North Nort	olk Coast	SPA and	Ramsar								
Distance to East Anglia TWO (km)	99 (windfa	rm site) a	nd 87 (ca	ble corrid	lor)							
Site Features	Likely e	ffect(s) of	East Angli	a TWO								
	Collision	n mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumulat	tive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features wigeon, pink-footed goose, brent goose, knot, avocet		Y (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (f)	Y (a)	N (f)
Breeding bittern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (f)	N (f)	N (f)
Breeding marsh harrier		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (f)	N (f)	N (f)
Breeding avocet		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (f)	N (f)	N (f)
Breeding little tern, common tern, Sandwich tern		N (e)		N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (f)	N (f)	N (f)

- a) Survey data show little or no evidence of North Norfolk Coast SPA features wigeon, pink-footed goose, brent goose, knot, avocet occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration.
- b) Survey data show no evidence of North Norfolk Coast SPA feature bittern occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- c) Marsh harrier is a migrant species. Satellite tracking suggests that marsh harriers migrate overland to the south coast of England and over the Channel to France, rather than across the North Sea.
- d) Survey data show no evidence of North Norfolk Coast SPA feature avocet occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.





Site 119

Name of European Site: North Norfolk Coast SPA and Ramsar

Distance to East Anglia TWO (km) 99 (windfarm site) and 87 (cable corridor)

- e) Little tern, common tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km and 54km respectively (Thaxter et al. 2012), so there is no connectivity between the SPA and East Anglia TWO site. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded.
- f) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at North Norfolk Coast SPA and Ramsar.





Site 120

Name of European Site: North Norfolk Sandbanks and Saturn Reef SAC

Distance to East Anglia TWO 75 (windfarm site) and 73 (cable corridor)

(km)

Site	Likely 6	effect(s)	of East A	Anglia TV	VO													
Features	Perma	nent loss	5	Tempo disturb	rary phy ance	rsical		ering du sed susp ent		Re- mo contam sedime		n of	Undervand vib	water no oration	ise	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Reefs	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) Beyond the range of potential impact





Site 121

Name of European Site: Northumbria Coast SPA and Ramsar

Distance to East Anglia TWO (km) 350 (windfarm site) and 339 (cable corridor)

Site Features	Likely ef	fect(s) of E	East Anglia	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Nonbreeding turnstone, purple sandpiper Calidris maritima		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding little tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Survey data show little or no evidence of SPA features occurring in East Anglia TWO and migrations of birds from this SPA are likely to result in negligible numbers passing through the site during migration.
- b) Breeding little tern has a maximum foraging range of 11km from colonies (Thaxter et al. 2012), so would have no connectivity with East Anglia TWO. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Northumbria Coast SPA and Ramsar.





Site 122

Name of European Site: Noss SPA

Distance to East Anglia TWO (km) 889

Site Features	Likely eff	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features gannet, fulmar, guillemot, kittiwake, puffin, great skua		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) SPA is far beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through East Anglia TWO are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Noss SPA.





123 Site NTP S-H Wattenmeer und angrenzende Kustengebiete SAC Name of European Site: 448 **Distance to East Anglia TWO** (km) Likely effect(s) of East Anglia TWO Site Features Changes to water Underwater noise Vessel Interactions Indirect effects on In-combination quality prey С 0 D С 0 D С 0 D С 0 D С 0 D Harbour porpoise *Phocoena* N(a) phocoena Grey seal Halichoerus grypus N(a) Harbour seal Phoca vitulina N(a) N(a)

a) The distance between the potential impact range of the proposed project and the site is beyond that of potential for direct or indirect effects.





Site Name of European Site: Distance to East Anglia TWO (km)	124 Ooste 104	rscheld	le SAC												
Site Features		effect(s water no	<i>'</i>	t Anglia ⁻ Vessel	TWO Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of the proposed project and the extent of any impact on individuals from this site result are negligible and would result in no potential for LSE.





Site 125
Name of European Site: Orfordness - Shingle Street SAC

Distance to East Anglia TWO 37 (windfarm site) and 5 (cable corridor)

(km)

Site	l ikely e	offect(s)	of East A	nalia TV	/0													
Features		nent los		_	orary ph	ysical	Smoth increa suspe sedim	nded	ue to		obilisation minated ents	on of		water no	oise	In-con	nbination	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Coastal lagoons	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The primary feature of the SAC is a series of percolation lagoons which are separated from the marine environment by the Orford shingle beach. These features are described as non-marine as they occur landward of highest astronomical tide. Therefore, due to a physical barrier there is no pathway between the source of any effects in the marine environment and the receptor.





Site 1	26												
Name of European Site: Ċ	Stliche D	eutsche	Bucht SF	PA									
Distance to East Anglia TWO 4 (km)	34												
Site Features	Likely e	ffect(s) of	East Ang	lia TWO									
	Collision	n mortality	,	Displace	ement/Dis	turbance	Barrier I	Effect		Cumula	tive/In-co	mbination	
	С	0	D	С	0	D	С	0	D	С	0	D	
Ornithology													
Nonbreeding seabirds (razorbill, fulmar, black-throated diver, red-throated diver, herring gull, common gull, lesser black-backed gull, great black-backed gull, little gull, black-headed gull <i>Chroicocephalus ridibundus</i> , common scoter, great crested grebe, kittiwake, common tern, Arctic tern, sandwich tern, gannet, guillemot)	N (a) N (a) N (a) N (a) N (a) N (b) N (b)												
 a) Migrations of birds from this SF BDMPS regional populations b) The predicted effect attributable assessment for these features 	e to East	Anglia TW	/O is so s	mall that i	·			_	-				
Site Features	Likely e	ffect(s) of	East Ang	lia TWO									
	Underw	ater noise	Ves	ssel Intera	ctions	Indirect of prey	effects on	C	hanges to quality		In-co	mbination	





Site	126														
Name of European Site:	Östliche	Deutsc	he Buc	ht SPA											
Distance to East Anglia TWO (km)	434														
	С	0	D	С	0	С	0	D	С	0	С	0	D	С	0
Marine Mammals	·														
Harbour porpoise <i>Phocoena</i> phocoena	N(c)	N(c)	N(c)				N(c)								
Grey seal Halichoerus grypus	N(c)	N(c)	N(c)				N(c)								
Harbour seal Phoca vitulina	N(c)	N(c)	N(c)				N(c)								

c) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site: Distance to East Anglia TWO (km)	127 Ouess 630	ant-Mo	lene S <i>A</i>	vC											
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indired	t effects	on	Change	es to wa	ter	In-com	bination	
							prey			quality					
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any impact on individuals from this site result are negligible and would result in no potential for LSE.





Site 128 Name of European Site: **Outer Thames Estuary SPA and pSPA extension Distance to East Anglia TWO** Within cable corridor (km) Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination C 0 D 0 D С 0 D 0 D Y (a) Y (a) Nonbreeding red-throated divers Y (b) Y (c) Y (b) Y (b) Y (a) Y (b) Y (a) N (e) N (d) N (d) N (d) N (d) N (d) Breeding little tern and common tern N (d) N (d) N (d) N (d) N (d)

- a) Given the overlap of the East Anglia TWO cable corridor with this SPA and pSPA, collision risk cannot be ruled out at this stage and further assessment is required.
- b) Given the overlap of the East Anglia TWO cable corridor with this SPA and pSPA, further detailed assessment is appropriate. Disturbance to red-throated diver is possible, especially during export cable installation. Great Yarmouth may be used as a port for construction vessels for the East Anglia TWO site; this port is located very close to the northern extent of the SPA however is outside the main concentrations of red-throated divers. This, together with the extent of existing vessel movements in the area means the addition of construction traffic as a result of Norolk Boreas will make little difference to the existing baseline and therefore the potential for LSE is considered to be negligible.
- c) Following advice from Natural England it is considered that Operations and Maintenance vessels may disturb red-throated divers whilst transiting through the SPA therefore an LSE cannot be screened out.
- d) SPA is beyond maximum foraging range of designated breeding seabird species (terns) and tern foraging tends to be coastal so has no breeding season connectivity. Proportions of these populations migrating through East Anglia TWO are likely to be small as these species are thought to remain close to shore during much of their migration through UK waters.
- e) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Outer Thames Estuary SPA.





Site 129

Name of European Site: Papa Stour SPA

Distance to East Anglia TWO (km) 922

Site Features	Likely e	ffect(s) of I	East Angli	a TWO								
	Collision	Displacement/Disturbance Barrier Effect Cumulative/In-combination										
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding Arctic tern		N (a)		N (a)	N (c)	N (c)	N (c)					
Breeding ringed plover		N (b)		N (b)								

- a) Papa Stour SPA is beyond maximum foraging range of Arctic tern so has no breeding season connectivity. The proportion of the population migrating through the East Anglia TWO site is very small relative to BDMPS.
- b) Ringed plovers breeding in Scotland 'tend to winter locally or move only short distances' (Forrester et al. 2007) so birds from Papa Stour are extremely unlikely to reach the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Papa Stour SPA.

Breeding Arctic tern





Site 130 Name of European Site: Papa Westray (North Hill and Holm) SPA Distance to East Anglia TWO (km) 842 Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance Cumulative/In-combination **Barrier Effect** C C 0 D С 0 0 D С 0 D

Breeding Arctic skua

N (a)

N (a)

N (a)

N (a)

N (b)

N (b)

N (b)

N (c)

N (d)

N (d)

N (d)

N (e)

N (e)

N (e)

N (e)

N (f)

N

N (a)

N (a)

N (a)

N (a)

N (a)

N (b)

N (b)

N (b)

b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Papa Westray SPA.

N (a)

N (a)

Site 131 Pater Noster-skärgården SAC Name of European Site: 867 **Distance to East Anglia TWO** (km) Site Features Likely effect(s) of East Anglia TWO Underwater noise Vessel Interactions Indirect effects on Changes to water In-combination quality prey С С 0 0 С 0 0 D 0 D C D C D D Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia TWO and the site is beyond that of potential for direct or indirect effects.





Site 132

Name of European Site: **Pentland Firth Islands SPA**

Distance to East Anglia TWO

777

(km)

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	ffect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding Arctic tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

a) Pentland Firth Islands SPA is beyond maximum foraging range of Arctic tern so has no breeding season connectivity. The proportion of the population migrating through the East Anglia TWO site is likely to be extremely small relative to BDMPS.

b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Pentland Firth Islands SPA.





Site 133 Name of European Site: **Portsmouth Harbour SPA Distance to East Anglia TWO** 261 (km) Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 D С 0 С 0 С 0 D D D Nonbreeding brent goose, dunlin, N (a) N (a) N (a) N (a) N (a) N (b) N (b) N (b) N (a) N (a) black-tailed godwit, red-breasted merganser

a) Survey data show little or no evidence of Portsmouth Harbour SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.

b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Portsmouth Harbour SPA.





Site	134														
Name of European Site:	Presq	u'ile De	Crozor	SAC											
Distance to East Anglia TWO (km)	630														
Site Features	Likely	effect(s	of East	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 135 Name of European Site: Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA **Distance to East Anglia TWO (km)** 448 Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 D С С 0 0 D 0 D Breeding seabirds including common N (a) N (e) N (e) N (e) gull, lesser black-backed gull, great black-backed gull, Mediterranean gull, black-headed gull, little tern, common tern, Arctic tern, Sandwich tern, black tern, gull-billed tern Gelochelidon nilotica Nonbreeding seabirds including N (b) N (e) N (e) N (e) razorbill, black-throated diver, redthroated diver, common gull, lesser black-backed gull, great black-backed gull, Mediterranean gull, black-headed gull, little gull, kittiwake, little tern, common tern, Arctic tern, Sandwich tern, cormorant, guillemot Waterbirds including pintail, shoveler, N (c) N (e) N (e) N (e) teal, wigeon, mallard, garganey Anas querquedula, grey heron Ardea cinerea, turnstone, bittern, brent goose, barnacle goose, sanderling, dunlin, curlew sandpiper, ringed plover, Kentish plover Charadrius





Site 1	35											
Name of European Site:	lamsar-Ge	ebiet S-H	Wattenmo	eer und a	ngrenzen	de Küsteı	ngebiete :	SPA				
Distance to East Anglia TWO (km) 4	48											
Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
alexandrinus, Bewick's swan, whooper swan, snipe Gallinago gallinago, oystercatcher, black-winged stilt Himantopus himantopus, bar-tailed godwit, black-tailed godwit, common scoter, red-breasted merganser, curlew, whimbrel, ruff, spoonbill, golden plover, grey plover, red-necked grebe Podiceps grisegena, black-necked grebe Podiceps nigricollis, avocet, eider, shelduck, greenshank, redshank, lapwing												
Terrestrial birds (various species)		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)

- a) The East Anglia TWO site is beyond maximum foraging range of designated breeding seabird species from this SPA, so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be extremely small relative to BDMPS.
- b) Migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site relative to the size of BDMPS regional populations, not only because of the distance, but also because seabirds and waterbirds from this SPA are likely to migrate predominantly along the continental coast of the North Sea towards northern breeding grounds rather than across the southern North Sea.
- c) Survey data show little or no evidence of these waterbird features occurring in the East Anglia TWO OWF sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site, as most of these birds are likely to remain on the continental side of the North Sea.





Site 135 Name of European Site: Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA Distance to East Anglia TWO (km) 448 Site Features Likely effect(s) of East Anglia TWO Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination 0 D 0 d) Terrestrial birds from this SPA are very unlikely to migrate to the UK; those that do migrate are more likely to follow the west European flyway along the continental coast. e) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at this SPA.

Site	136														
Name of European Site:	Récifs	et mar	ais arri	ère-litto	aux du	Cap Lév	ri à la Po	ointe de	Saire S	AC					
Distance to East Anglia TWO (km)	355														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel	Interact	ions	Indirec	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impac	t range (of East A	nglia TV	VO and t	he site is	s beyond	that of	potential	for direc	t or indir	ect effec	ts.	





Site 137

Name of European Site: Recifs Gris-Nez Blanc-Nez SAC

Distance to East Anglia TWO 123 (windfarm site) and 131 (offshore cable corridor)

(km)

Marine Mammals

Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel Interactions			Indirect effects on prey			Chang quality	es to w	ater	In-com	nbinatior	า
	С				0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise Phocoena phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal <i>Halichoerus</i> grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal <i>Phoca</i> <i>vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

Benthic Habitats

Site Features	Perma	nent los	SS	disturbance		increased				obilisatio ninate d ents		Undervand vik	water no oration	oise	In-com	bination	1	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)
Reefs	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

Information to Support AA – Screening Matrices



Site 137

Name of European Site: Recifs Gris-Nez Blanc-Nez SAC

Distance to East Anglia TWO 123 (windfarm site) and 131 (offshore cable corridor)

(km)

b) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes





Site 138

Name of European Site: Ridens et dunes hydrauliques du detroit du Pas-de-Calais SAC

Distance to East Anglia TWO 132

(km)

Marine Mammals

Site Featur	res	Likely	effect(s) of Eas	t Anglia	TWO										
		Under	water n	oise	Vessel Interactions						Chang quality	es to w	ater	In-com	nbinatio	า
		С				0	D	С	0	D	С	0	D	С	0	D
Harbour po Phocoena p	-	N(a)	N(a) N(a) N(a)		N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal <i>F</i> grypus	Halichoerus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour sea vitulina	al <i>Phoca</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

Benthic Habitats

Site Features	Perma	nent los	SS	Tempo disturb	orary phoance	ysical	increas	ering du sed nded se			obilisatio ninate d ents		Undervand vik	water no oration	oise	In-com	binatior	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)
Reefs	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)

a) The distance between the potential impact range of East Anglia TWO and the site is beyond that of potential for direct or indirect effects.





Site 138

b) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.

Site			1	39																	
Name of Europe	ean Sit	e:	R	iver C	erwen	t SAC															
Distance to Eas	t Angl	ia TWC) 2	61																	
Site features	Likely	effect(s) of Ea	ast An	glia TW	0															
	Perma	anent h	nabitat	phys	porary ical rbance		increa	ended	due to		obilisa Itamina ents			water ibratior		Electro fields (_	etic	In-con	mbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
River lamprey	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)

a) River lamprey are restricted to rivers and coasts so there can be no direct interaction with the proposed East Anglia TWO project. Sea lamprey could in theory be present in the vicinity of the proposed East Anglia TWO project, but given their life history interaction would be limited. The distance between the proposed project and the site precludes direct impact upon the site and its supporting habitats.





Site	140											
Name of European Site:	Ronas H	ill - North	Roe and	Tingon SF	PA							
Distance to East Anglia TWO (km)	938											
Site Features	Likely e	y effect(s) of East Anglia TWO sion mortality Displacement/Disturbance Barrier Effect Cumulative/In-										
	Collisio	n mortality	/	Displace	ement/Dist	urbance	Barrier	Effect		Cumula		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding great skua		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding red-throated diver		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (d)	N (d)	N (d)
Breeding merlin		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (d)	N (d)	N (d)

- a) Ronas Hill, North Roe & Tingon SPA is beyond maximum foraging range of great skua so has no breeding season connectivity. The proportion of the population migrating through the East Anglia TWO site is likely to be extremely small relative to BDMPS.
- b) Ronas Hill, North Roe & Tingon SPA is beyond maximum foraging range of red-throated diver so has no breeding season connectivity. The proportion of the population migrating through the East Anglia TWO site is likely to be extremely small relative to BDMPS.
- c) Merlins from this population are likely to migrate to wintering areas that are predominantly within the UK. A few, mostly young birds, may winter on the European continent so could possibly pass through the East Anglia TWO site. However, no merlins have been seen during site specific surveys, and the chances of any from this SPA passing through the site are likely to be extremely low.
- d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Ronas Hill, North Roe & Tingon SPA.





Site 141

Name of European Site: Rousay SPA

Distance to East Anglia TWO 826

(km)

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	ffect		Cumulative/In-combinati		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features guillemot, Arctic skua, Arctic tern, kittiwake, fulmar		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Rousay SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Rousay SPA.





Site	142														
Name of European Site:	Sälöfj	orden S	AC												
Distance to East Anglia TWO (km)	858														
Site Features	Likely	effect(s	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirect prey	t effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impact	range	of East A	nglia TV	VO and t	he site is	beyond	that of	potential	for direc	t or indir	ect effec	ts.	

5.3.4 Information to Support AA – Screening Matrices





Site 143 Sanday SAC Name of European Site: 745 **Distance to East Anglia TWO** (km) Likely effect(s) of East Anglia TWO Site Features Indirect effects on Changes to water In-combination Underwater noise **Vessel Interactions** quality prey 0 0 0 С 0 D С 0 D С D С D С D Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

Site Name of European Site: Distance to East Anglia TWO (km)	144 Sandlings Within on		ore cable corridor									
Site Features	Likely effe Habitat Lo		ast Angli	a TWO Displacement	/Disturbance	2	In combina	In combination				
	C	0	D	C	0	D	С	О	D			
Breeding nightjar Caprimulgus europaeus	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)			
Breeding woodlark <i>Lullula</i> arborea	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)			





Site Name of European Site:	145 SBZ 1	/ ZPS 1	SPA												
Distance to East Anglia TWO (km)	94 (wi	ndfarm	site) ar	nd 107 (c	offshore	cable c	orridor)								
Site Features	Likely	effect(s) of East Anglia TWO													
	Under	derwater noise													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal <i>Phoca vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	Y(b)	Y(b)	Y(b)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

b) The East Anglia TWO windfarm site is within the foraging range of grey seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out.





Site 146 SBZ 2 / ZPS SPA Name of European Site: 84 (windfarm site) and 100 (offshore cable corridor) **Distance to East Anglia TWO** (km) Site Features Likely effect(s) of East Anglia TWO Underwater noise **Vessel Interactions** Indirect effects on Changes to water In-combination quality prev С С С 0 D С D С 0 D 0 D 0 D 0 Grey seal Halichoerus grypus Y(b) Y(b) Y(b) N(a) N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.

b) The East Anglia TWO windfarm site is within the foraging range of grey seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out.

Site Name of European Site: Distance to East Anglia TWO (km)		/ ZPS 3 ndfarm		nd 108 (c	offshore	cable c	orridor)								
Site Features	Under	effect(s) water no	oise		Interact	1	prey	t effects		quality	es to wat			bination	
	С	0	D	С	0	D	С	0	D	C	0	D	С	0	D
Grey seal Halichoerus grypus	Y(b)	Y(b)	Y(b)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

- a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- b) The East Anglia TWO windfarm site is within the foraging range of grey seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out.





Site 148

Name of European Site: **Scanner Pockmark SAC**

Distance to East Anglia TWO

667

Site	Likely 6	effect(s)	of East A	۹nglia T۱	VO													
Features	Permanent loss Temporary physical disturbance C O D C O D				ysical	Smoth increa suspe sedim	nded	ue to		obilisation minated ents	on of		water naibration	oise	In-con	nbinatior	า	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Submarine structures made by leaking gases	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE.





Site 149

Name of European Site: Seevogelschutzgebiet Helgoland SPA

Distance to East Anglia TWO 428

(km)

Site Features	Likely ef	fect(s) of E	East Angli	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	ffect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features razorbill, fulmar, herring gull, lesser black-backed gull, kittiwake, gannet, guillemot		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Nonbreeding seabird assemblage including razorbill, black-throated diver, red-throated diver, common gull, lesser black-backed gull, little gull, kittiwake, common scoter, red-necked grebe, eider, common tern, Arctic tern, Sandwich tern, gannet, guillemot		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (c)	N (c)	N (c)

- a) Tracking data from gannets breeding on Helgoland show these birds do not travel in the direction of or as far as the East Anglia TWO site despite this site being within theoretical maximum foraging range of gannet. East Anglia TWO is beyond the maximum foraging range of other seabird species at Seevogelschutzgebeit Helgoland SPA. Proportions of these populations migrating through East Anglia TWO are likely to be very small relative to BDMPS regional populations.
- b) Migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site during migration relative to the size of BDMPS regional populations, not only because the sites are 428km apart, but also because nonbreeding seabirds from this SPA are likely to migrate predominantly along the continental coast of the North Sea towards northern breeding grounds rather than across the southern North Sea.





Site 149

c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Seevogelschutzgebeit Helgoland SPA.

Site	150														
Name of European Site:	Skage	ns Gre	n og Sk	agerrak	SAC										
Distance to East Anglia TWO (km)	770														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirect prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impact	range	of East A	nglia TV	VO and t	he site is	s beyond	that of	potential	for direc	t or indir	ect effec	ts.	





Site 151 Name of European Site: Solent & Southampton Water SPA & Ramsar (offshore cable corridor) Distance to East Anglia TWO (km) 267 Likely effect(s) of East Anglia TWO Site Features Displacement/Disturbance Cumulative/In-combination Collision mortality **Barrier Effect** С 0 D С 0 D С 0 D 0 D Nonbreeding teal, brent goose, ringed N (a) N (a) N (a) N (a) N (a) N (a) N (d) N (d) N (d) N (a) plover, black-tailed godwit N (b) Breeding Mediterranean gull N (b) N (c) Breeding little tern, common tern, N (c) roseate tern. Sandwich tern

- a) Survey data show little or no evidence of Solent & Southampton Water SPA and Ramsar features occurring in the East Anglia TWO site, and migrations of birds from this site are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) No Mediterranean gulls were recorded in the East Anglia TWO site during bird surveys. This species is scarce in England, although increasing. Birds from the SPA are unlikely to migrate through the East Anglia TWO site. Thaxter et al. (2012) report the maximum foraging range of breeding Mediterranean gulls as 20km, so birds from this SPA will not have connectivity with the East Anglia TWO site during breeding.
- c) Little tern, common tern, roseate tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km, 30km and 54km respectively (Thaxter et al. 2012), so there is no connectivity between the SPA and the East Anglia TWO site which are 244km apart. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded.
- d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Solent & Southampton Water SPA and Ramsar.

potential for LSE.





Site	152														
Name of European Site:	Sotesl	cär SAC	;												
Distance to East Anglia TWO (km)	885														
Site Features	Likely	effect(s)	of Eas	t Anglia	TWO										
	Under	vater no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no

Site Name of European Site: Distance to East Anglia TWO (km)			rth Sea idor and	SAC d windfa	rm site)										
Site Features		ly effect(s) of East Anglia TWO erwater noise													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	Y(a)	Y(a)	Y(a)	Y(a)	Y(a)	Y(a)	Y(a)	Y(a)	Y(a)	Y(a)		Y(a)	Y(a)	Y(a)	Y(a)

a) The offshore project area is within the SAC and therefore LSE cannot be ruled out at the screening stage. It is assumed that all harbour porpoise in this area are associated with this SAC.





Site 154

Name of European Site: St Abb's Head to Fast Castle SPA

Distance to East Anglia TWO 487

(km)

Site Features	Likely ef	fect(s) of I	East Angli	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	ffect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features herring gull, kittiwake, razorbill, guillemot, shag		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) St Abbs Head to Fast Castle SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at St Abbs Head to Fast Castle SPA.





Site 155 Staverton Park and the Thicks Wantisden SAC Name of European Site: 6 (onshore cable corridor) **Distance to East Anglia TWO** (km) Likely effect(s) of East Anglia TWO Site Features Habitat Loss 0 D Old acidophilous oak woods N(a) N(a) N(a) with *Euercus robur* on sandy plains a) No overlap therefore no direct effect and beyond the range of potential significant indirect effect

Site	156														
Name of European Site:	Steing	grund S	AC												
Distance to East Anglia TWO (km)	438														
Site Features	Likely	effect(s) of Eas	t Anglia	ΓWΟ										
	Under	effect(s) of East Anglia TWO rwater noise													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)





Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia TWO and the site is beyond that of potential for direct or indirect effects.

Site	157														
Name of European Site:	Store	Rev SC	CI C												
Distance to East Anglia TWO (km)	743														
Site Features	Likely	Likely effect(s) of East Anglia TWO													
	Under	rwater noise													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)														N(a)





Site 158 Name of European Site: Stour & Orwell Estuaries SPA and Ramsar **Distance to East Anglia TWO** 57 (windfarm site) and 31 (cable corridor) (km) Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С D С С 0 0 С D 0 D 0 D Wintering and passage waterbird N (a) N (a) N (a) N (a) N (a) N (c) N (c) N (c) N (a) N (a) assemblage including as named features pintail, wigeon, gadwall, turnstone, brent goose, goldeneye, dunlin, knot, ringed plover, black-tailed godwit, curlew, cormorant, grey plover, great crested grebe, shelduck, redshank, lapwing N (b) N (b) Breeding avocet N (b) N (b) N (b) N (b) N (b) N (c) N (c) N (c)

- a) Survey data show little or no evidence of Stour & Orwell Estuaries SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Survey data show no evidence of Stour & Orwell Estuaries SPA feature avocet occurring in the East Anglia TWO OWF sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Stour & Orwell Estuaries SPA and Ramsar.





Site	159															
Name of European Site:	Strand	denge p	oå Læsø	og hav	et syd h	erfor SA	C									
Distance to East Anglia TWO (km)	843															
Site Features	Likely	effect(s	ect(s) of East Anglia TWO													
	Under	water n	rater noise Vessel Interactions Indirect effects on quality In-combination													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
a) The distance between the	potentia	l impac	t range	of East A	.nglia TV	VO and t	he site i	s beyond	that of	potential	for direc	t or indir	ect effec	ts.		





Site 160

Name of European Site: Sumburgh Head SPA

Distance to East Anglia TWO (km) 862

Site Features	Likely ef	fect(s) of	East Anglia	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	ffect		Cumulat	ive/In-com	bination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features kittiwake, fulmar, guillemot, Arctic tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Sumburgh Head SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Sumburgh Head SPA.





Site 161

Name of European Site: Sydlige Nordsø SAC

Distance to East Anglia TWO 456

(km)

()															
Site Features	Likely	effect(s) of East	Anglia -	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirec	t effects	on	Change	es to wat	ter	In-com	oination	
	prey quality														
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the site is beyond that of potential for direct or indirect effects.





Site				162														
Name of I	European Site:			Sylte	r Au	ßenriff S0	CI											
	to East Anglia TWO	(km)		400														
Ornitholo																		
Site Featu			Likely	effect	(s) of	f East Ang	glia TW0)										
			Collisio	on mo	rtalit	:V	Displa	cement/D	Distu	bance	В	Barrier Eff	ect		Cumu	lative/Ir	n-comb	ination
			С	0		D	С	0		D	С	;	0	D	С	0		D
including throated described black-backed gukittiwake, Sandwich	Ionbreeding seabird assemblage ncluding black-throated diver, rednoated diver, common gull, lesser lack-backed gull, great black-acked gull, little gull, gannet, ittiwake, common tern, Arctic tern, candwich tern, guillemot Idarine mammals Site Features Like			N (a))		N (a)	N (a)		N (a)	N	I (a)	N (a)	N (a)	N (b)	N (t	0)	N (b)
		Liko	ly offoc	t(c) of	Fac	t Anglia T	M/O											
Sile i eato	JI 65		erwater			Vessel		ions	Ind	irect et	ffects	on prey	Chang	ges to wat	er	In-cor	nbinati	on
		С	0	D		С	0	D	С)	D	С	0	D	С	0	D
Harbour p	orpoise <i>Phocoena</i>	N (c) N (c) N	(c)	N (c)	N (c)	N (c)	N (c) N	1 (c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
Grey seal	Halichoerus grypus	N (c	:) N (d) N	(c)	N (c)	N (c)	N (c)	N (c) N	1 (c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
Harbour s	eal <i>Phoca vitulina</i>	N (c) N () N	(c)	N (c)	N (c)	N (c)	N (c) N	1 (c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
Fish												<u> </u>					1 \-7	
Site	Likely effect(s) of Ea	st Angl	ia TWO															
Features	Permanent habitat loss	Tempo physic disturb	al			nothering or creased	due to	Re- mol contami sedimer	inate			nderwate d vibratio		Electrom fields (El	_	In	-combi	nation





Site Name of				(km)		162 Sylte 400	r Auße	nriff S0	CI												
Distance	istance to East Anglia TWO (km)						suspe	ended nent													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
River lamprey	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)
Twaite shad	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)

- a) Migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site relative to the size of BDMPS regional populations, not only because the sites are 400km apart, but also because nonbreeding seabirds from this SPA are likely to migrate predominantly along the continental coast of the North Sea towards northern breeding grounds rather than across the southern North Sea.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Sylter Außenriff SPA.
- c) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA.





Site 163

Name of European Site: **Teesmouth and Cleveland Coast SPA and Ramsar**

Distance to East Anglia TWO 332

(KIII)												
Site Features	Likely eff	fect(s) of I	East Angli	a TWO								
	Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination											nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Nonbreeding knot, redshank		N (a)		N (a)	N (d)	N (d)	N (d)					
Nonbreeding Sandwich tern		N (b)		N (b)	N (d)	N (d)	N (d)					
Breeding little tern		N (c)		N (c)								

- a) Survey data show little or no evidence of Teesmouth & Cleveland Coast SPA features knot or redshank occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Nonbreeding Sandwich terns at Teesmouth & Cleveland Coast SPA may migrate between the SPA and wintering areas off west Africa. This could take them near to East Anglia TWO. However, very few terns of any species were seen in the East Anglia TWO site during bird surveys, and the Sandwich tern tends to migrate close to the coast where that is possible, so there are unlikely to be significant numbers reaching the East Anglia TWO site. The few that do will have a very low collision risk due to their generally low flight height and displacement/barrier effects will be negligible in the context of a migration of thousands of kilometres.
- c) Breeding little tern has a maximum foraging range of 11km from colonies (Thaxter et al. 2012), so would have no connectivity with East Anglia TWO. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Teesmouth & Cleveland Coast SPA and Ramsar.

Nonbreeding hen harrier





N (c)

N (c)

Site 164 Name of European Site: **Thames Estuary and Marshes SPA and Ramsar** Distance to East Anglia TWO (km) 116 (windfarm site) and 99 (offshore cable corridor) Likely effect(s) of East Anglia TWO Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination D С 0 С 0 D С 0 D С 0 D Wintering and passage waterbird N (a) N (a) N (a) N (c) N (c) N (a) N (a) N (a) N (a) N (c) assemblage including as named features dunlin, knot, ringed plover, black-tailed godwit, grey plover, avocet, redshank

a) Survey data show little or no evidence of Thames Estuary & Marshes SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.

N (b)

N (b)

N (b)

N (b)

N (b)

N (c)

N (b)

N (b)

- b) Survey data show no evidence of hen harrier occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site, as the species is likely to migrate overland rather than over sea where the option is available.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Thames Estuary & Marshes SPA and Ramsar.





Site 10	165 Thanet Coast and Sandwich Bay SPA and Ramsar													
Name of European Site:	nanet Coa	st and Sa	ndwich Ba	ay SPA aı	nd Ramsa	ır								
Distance to East Anglia TWO 8' (km)	87 (windfarm site and 88 (offshore cable corridor))													
Site Features	Likely effect(s) of East Anglia TWO													
	Collision	n mortality		Displace	ement/Dist	turbance	Barrier I	Effect		Cumulat	ive/In-cor	nbination		
	С	0	D	С	0	D	С	0	D	С	0	D		
Nonbreeding turnstone, golden plover		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)		
Breeding little tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		

- a) Survey data show little or no evidence of Thanet Coast & Sandwich Bay SPA features turnstone or golden plover occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Breeding little tern has a maximum foraging range of 11km from colonies (Thaxter et al. 2012), so would have no connectivity with the East Anglia TWO site. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the East Anglia TWO site.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Thanet Coast & Sandwich Bay SPA and Ramsar.





Site 166

Name of European Site: Thanet Coast SAC

Distance to East Anglia TWO 86

(km)

(km)																		
Site	Likely 6	effect(s)	of East	Anglia T\	NO													
Features	Perma	anent los	SS	Temp disturb	orary ph	ysical	Smoth increa suspe sedim	nded	ue to		obilisation minated ents	on of		water no	oise	In-con	nbinatior	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Mudflats and sandflats not covered by seawater at low tide	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Reefs	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE.





Site	167													
Name of European Site:	The S	wale SPA 8	Ram	sar										
Distance to East Anglia TWO (km)	109 (\	vindfarm si	te) an	d 98 (cable corri	dor)									
Site Features	Like	Likely effect(s) of East Anglia TWO												
	Collision mortality Displacement/Disturbance Barrier Effect Cumulative/Incombination													
	С	0	D	С	0	D	С	0	D	С	0	D		
Wintering and passage waterbird assemblage including as named features brent goose, dunlin, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)		

- a) Survey data show little or no evidence of The Swale SPA and Ramsar features occurring in the East Anglia TWO site, and migrations of birds from this site are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at The Swale SPA and Ramsar.





Site 168 The Wash and North Norfolk Coast SAC Name of European Site: 99 (windfarm site) and 90 (cable corridor) Distance to East Anglia TWO (km) **Marine Mammals** Site Features Likely effect(s) of East Anglia TWO In-combination Vessel Interactions/ Indirect effects on prey Changes to water quality Underwater noise disturbance at seal haul out sites С С 0 С 0 D С С 0 D 0 D 0 D D Y (a) Y (a) Y (a) Harbour seal Y (a) Phoca vitulina Y (a) Y (a) Y (a) Grey seal Y (a) Halichoerus grypus **Benthic Habitats** Temporary physical Smothering due to Site Features Re- mobilisation of Underwater In-combination Permanent loss disturbance increased suspended contaminated noise and sediment sediments vibration D С С 0 D С 0 D С 0 0 D С 0 D С 0 D Sandbanks which N (b) N (b) N (b) Ν N (b) N (b) Ν Ν N (b) N (b) Ν Ν Ν Ν Ν Ν are slightly (b) (b) (b) (b) (b) (b) (b) (b) (b) covered by sea water all the time Mudflats and N (b) N (b) N (b) Ν N (b) N (b) Ν Ν N (b) N (b) Ν Ν Ν Ν Ν Ν sandflats not (b) (b) (b) (b) (b) (b) (b) (b) (b) covered by seawater at low tide Large shallow N (b) Ν N (b) N (b) N (b) Ν N (b) N (b) N (b) Ν Ν Ν Ν Ν Ν Ν inlets and bays (b) (b) (b) (b) (b) (b) (b) (b) (b)





Site 168

Name of European Site: The Wash and North Norfolk Coast SAC
Distance to East Anglia TWO (km) 99 (windfarm site) and 90 (cable corridor)

a) Potential effects from underwater noise; vessel interactions; changes to water quality; changes to prey resources; and disturbance at seal haul-out sites for foraging grey and harbour seal cannot be ruled out. Nearest SAC for harbour seal to East Anglia TWO. Assumed that all harbour seal in the East Anglia TWO area are associated with this SAC. Potential for vessel interactions and disturbance at seal haul-out sites depending on vessel route and therefore LSE cannot be ruled out.

b) The distance between East Anglia TWO and the designated site is beyond the range of any potential LSE





Site 169

Name of European Site: The Wash SPA and Ramsar

Distance to East Anglia TWO (km) 128 (windfarm site) and 106 (cable corridor)

Site Features	Likely ef	fect(s) of I	East Anglia	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features pintail, wigeon, gadwall, pinkfooted goose, turnstone, brent goose, goldeneye, sanderling, dunlin, knot, Bewick's swan, oystercatcher, bartailed godwit, black-tailed godwit, common scoter, curlew, grey plover, shelduck, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding little tern, common tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Survey data show little or no evidence of The Wash SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Little tern and common tern have maximum foraging ranges from colonies of 11km and 30km respectively (Thaxter et al. 2012), so there is no connectivity between the SPA and East Anglia TWO site which are 106km apart. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at The Wash SPA and Ramsar.





Site Name of European Site: Distance to East Anglia TWO (km)	170 Tregoi 498	^r Goëlo	SAC												
Site Features	_	ikely effect(s) of East Anglia TWO nderwater noise													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 171

Name of European Site: Troup, Pennan and Lion's Heads SPA

Distance to East Anglia TWO (km) 657

Site Features	Likely eff	fect(s) of I	East Anglia	a TWO								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features razorbill, fulmar, guillemot, kittiwake, herring gull		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Troup, Pennan & Lion's Heads SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Troup, Pennan & Lion's Heads SPA.





Site	172														
Name of European Site:	Untere	ms un	d Außer	nems SC	CI										
Distance to East Anglia TWO (km)	343														
Site Features	Likely	Likely effect(s) of East Anglia TWO													
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	oination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	173														
Name of European Site:	Vadeh	avet m	ed Ribe	Å, Tvec	l Å og V	arde Å v	est for '	Varde S	AC						
Distance to East Anglia TWO (km)	507														
Site Features	Likely	effect(s) of Eas	t Anglia	TWO										
	Under	water n	oise	Vessel	Interact	ions	Indired prey	t effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impac	t range	of East A	nglia TV	VO and t	he site is	s beyond	that of	ootential	for direc	t or indire	ect effec	ts.	

^{5.3.4} Information to Support AA – Screening Matrices





Site	174														
Name of European Site:	Venø,	Venø S	und SA	'C											
Distance to East Anglia TWO (km)	626														
Site Features	Likely	effect(s	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wat	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impact	range o	of East A	nglia TV	VO and t	he site is	beyond	that of p	otential	for direct	t or indire	ect effec	ts.	





Site 175 Name of European Site: Vlaamse Banken SAC **Distance to East Anglia TWO** 59 (windfarm site) and 72 (offshore cable corridor) (km) **Marine Mammals** Likely effect(s) of East Anglia TWO Site Features Indirect effects on prey Changes to water quality In-combination Vessel Interactions and Underwater noise disturbance at seal haul outs 0 D С С 0 D С D С 0 0 D 0 D Harbour porpoise Ν N (a) Ν N (a) Ν Phocoena (a) (a) (a) phocoena Υ N (a) N (a) N (a) N (a) Grey seal Υ Y (b) N (a) N (a) N (a) N (a) N (a) N (a) Ν Halichoerus (b) (b) (a) grypus Υ Υ Y (b) N (a) Harbour seal Ν Phoca vitulina (b) (b) (a) Fish Site Likely effect(s) of East Anglia TWO **Features** Smothering due to Electromagnetic Permanent Temporary Re-mobilisation Underwater noise In-combination physical fields (EMF) habitat loss increased of contaminated and vibration suspended disturbance sediments sediment 0 D 0 С С С 0 D 0 D С D С 0 С D 0 D 0 D





Site				1	75																	
Name of I	Europe	ean Sit	te:	١	/laams	e Bank	en SA	C														
Sea Lamprey	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c) N(c) N(c) N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c	: N(c) N	l(c)
Twaite Shad	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c) N(c) N(c) N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c	: N(c) N	l(c)
Benthic h	abitat	s	·	•	•		•		·	•	•							'			· ·	
Site Featu	ıres		Permanent loss Temporary physical disturbance									ue to spended	cont	mobilisa aminate ments			derwat d vibrat	er noise tion)	In-co	mbina	ation
			С	()	D	С	0	D	С	0	D	С	0	D	С	0	D		С	0	D
Reefs			N((d) N	(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(c	N(d)	N(d)		N(d)	N(d)	N(d)
Sandbank slightly co water all th	vered	by sea		(d) N	(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(d)	N(c	N(d)	N(d)		N(d)	N(d)	N(d)

- a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- b) The East Anglia TWO windfarm site is within the foraging range of grey and harbour seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out.
- c) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA
- d) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.





Site 176

Name of European Site: Vlakte van de Raan SCI/SAC

Distance to East Anglia TWO (km) 82 (windfarm site) and 99 (cable corridor)

-	-									
Λ	Л	21	'II'	ne	N	ıa	m	m	а	9

Site Features	Likely e	effect(s) o	f East An	glia TWC)										
	Underw	ater nois	e	Vessel	Interactio	ns	Indirect	effects o	n prey	Change	s to wate	r quality	In-comb	ination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise Phocoena phocoena	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Grey seal Halichoerus grypus	Y (b)	Y (b)	Y (b)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Harbour seal <i>Phoca</i> vitulina	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

Fish

Site	Likely	/ effect(s) of Ea	ast Ang	lia TW0)															
Features	Perm loss	anent h	nabitat	Temp physic disturb	cal		Smoth increa suspe sedim	ended	due to		nobilisa ntamina nents			water i			omagn (EMF)	etic	In-con	nbinatio	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sea	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Lamprey	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
River	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
lamprey	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Twaite	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Shad	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)





Site 176

Name of European Site: Vlakte van de Raan SCI/SAC

Distance to East Anglia TWO (km) 82 (windfarm site) and 99 (cable corridor)

- a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- b) The East Anglia TWO windfarm site is within the foraging range of grey seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out.
- c) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA





Site 177

Name of European Site Voordelta SPA and SAC

Distance to East Anglia TWO 84 (windfarm site) and 101 (offshore cable corridor)

(km)

Ornitholog	ΙV
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Site Features	Likely effect(s) of East Ar	nglia TWC)										
		Collision	n mortalit	У	Displace	ement/Dis	turbance	Barrier	Effect		Cumula combina		
		С	0	D	С	0	D	С	0	D	С	0	D
cormorant, shelduck, goldeneye, sanderling crested grebe, greyla avocet, gadwall, Slav red-breasted mergan diver, bar-tailed godw	nstone, scaup, redshank,		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N(a)	N (b)	N (b)	N (b)

Marine Mammals

Site Features	Likely e	effect(s) c	of East Ar	nglia TW0)										
	Underw	ater nois	se	Vessel	Interactio	ns	Indirect	effects on	prey	Change	s to wate	r quality	In-comb	oination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
Phocoena															
phocoena															
Grey seal	Y (e)	Y (e)	Y (e)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
Halichoerus grypus															
Harbour seal Phoca	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
vitulina															





Site 177 Name of European Site Voordelta SPA and SAC **Distance to East Anglia TWO** 84 (windfarm site) and 101 (offshore cable corridor) (km) **Fish** Site Likely effect(s) of East Anglia TWO **Features** Permanent Temporary Smothering due to Re- mobilisation of Underwater noise Electromagnetic In-combination physical increased contaminated fields (EMF) habitat loss and vibration disturbance suspended sediments sediment С 0 C 0 D 0 D С 0 D С D С 0 D С 0 D С 0 D Sea N(d) lamprey River N(d) lamprey Allis N(d) shad Twaite N(d) shad **Benthic Habitats** Site Likely effect(s) of East Anglia TWO Features Smothering due to Re- mobilisation of Permanent loss Temporary Underwater noise In-combination physical increased contaminate d and vibration disturbance suspended sediments sediment С 0 D С 0 D С 0 С 0 D С 0 С 0 D D D





Site 177 Name of European Site Voordelta SPA and SAC **Distance to East Anglia TWO** 84 (windfarm site) and 101 (offshore cable corridor) (km) Sandbanks which are slightly N(e) covered by sea water all the time

- a) Survey data show little or no evidence of Voordelta SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Voordelta SPA.
- c) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- d) It was agreed as part of the East Anglia TWO Scoping Report that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA.
- e) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.
- f) The East Anglia TWO windfarm site is within the foraging range of grey seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out.





Site	178														
Name of European Site:	Vrång	öskärg	ården S	AC											
Distance to East Anglia TWO (km)	862														
Site Features	Likely	effect(s	of Eas	t Anglia	TWO										
	Under	water no	oise	Vessel	Interact	ions	Indired prey	t effects	on	Chang quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the	potentia	l impact	range o	of East A	nglia TV	VO and t	he site is	s beyond	that of	potential	for direc	t or indir	ect effec	ts.	

5.3.4 Information to Support AA – Screening Matrices





Site 179

Name of European Site: Waddenzee (Wadden Sea) SPA

Distance to East Anglia TWO 186

(km)												
Site Features	Likely ef	fect(s) of	East Angli	ia TWO								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-cor	mbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features lesser black-backed gull, little tern, common tern, Arctic tern, Sandwich tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding waterbirds including Kentish plover, ringed plover, marsh harrier, spoonbill, avocet		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (d)	N (d)	N (d)
Wintering and passage waterbirds including pintail, shoveler, teal, wigeon, mallard, gadwall, greylag goose, bean goose <i>Anser fabalis</i> , turnstone, scaup, brent goose, barnacle goose, goldeneye, sanderling, dunlin, knot, curlew sandpiper, ringed plover, black tern <i>Chlidonias niger</i> , hen harrier, Bewick's swan, oystercatcher, bartailed godwit, black-tailed godwit, redbreasted merganser, goosander, curlew, cormorant, spoonbill, golden plover, grey plover, great crested grebe, avocet, eider, shelduck,		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (d)	N (d)	N (d)





Site 179

Name of European Site: Waddenzee (Wadden Sea) SPA

Distance to East Anglia TWO (km)

greenshank, redshank, lapwing

- a) The East Anglia TWO site is far beyond the mean maximum foraging range of designated breeding seabird species from this SPA, so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be extremely small relative to BDMPS, not only because of the distance, but also because birds from this SPA are likely to use the west European flyway along the continental coast rather than crossing the southern North Sea. Lesser black-backed gull tracking has shown breeding birds do not cross the North Sea therefore no connectivity is expected for this species.
- b) Survey data show little or no evidence of Waddenzee SPA breeding waterbird features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- c) Survey data show little or no evidence of Waddenzee SPA nonbreeding waterbird features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- d) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Waddenzee SPA.





Site 180

Name of European S	ite:	'	Waddenze	e SAC														
Distance to East Ang (km)	lia TW	0 ′	186															
Marine Mammals																		
Site Features	Likely	effect(s) of East A	nglia T\	NO													
	Under	water n	oise	Vesse	el Intera	ctions	Indire prey	ct effec	ts on	Chang quality	es to w	/ater	In-cor	nbinatio	n			
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D			
Harbour porpoise Phocoena phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)			
Grey seal <i>Halichoerus</i> grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)			
Harbour seal <i>Phoca</i> <i>vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)			
Benthic Habitats																		
Site Features	Perma	anent lo	ss		orary ph bance	nysical	Smoth increasuspe suspe sedim	nded	due to	Ī	obilisati ninate d ents			water n bration	oise	In-com	nbinatio	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)
Estuaries	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)
Mudflats and sandflats not covered by seawater at low tide	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)	N (b)		N (b)	N (b)	N (b)	N (b)





Site 180

- a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.
- b) As it has been agreed through the scoping process that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.

Site 1	81											
Name of European Site:	Vest West	ray SPA										
Distance to East Anglia TWO (km) 8	37											
Site Features	Likely ef	fect(s) of	East Angli	a TWO								
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumula	tive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features kittiwake, Arctic tern, fulmar, razorbill, Arctic skua, guillemot		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) West Westray SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia TWO site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at West Westray SPA.





Site 182

Name of European Westerschelde & Saeftinghe SAC

Site:

Distance to East 106 (windfarm site) and 128 (offshore cable corridor)

Anglia TWO (km)

Site Features	Likely effect(s) of East Anglia TWO																				
	Permanent habitat loss			physic	ysical i turbance s			Smothering due to increased suspended sediment		Re- mobilisation of contaminated sediments		Underwater noise and vibration			Electromagnetic fields (EMF)			In-combination			
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
River lamprey	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Twaite Shad	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 183

Name of European Site: Winterton – Horsey Dunes SAC

Distance to East Anglia TWO (km)

Site Features Likely effect(s) of East Anglia TWO

Changes to water Underwater noise Vessel Interactions Indirect effects on In-combination quality prey С С D С 0 0 D 0 D С 0 С 0 D D N (a) N (a) Grey seal Halichoerus grypus Ν N (a) N (a) N (a) Ν N (a) N (a) Ν N (a) N (a) N (a) N (a) (a) (a) (a)

a) There is no potential for any direct disturbance as a result of activities within the East Anglia TWO windfarm site due to the distance between the site and the closest point onshore (31km). There is also no potential for any direct disturbance as a result of activities within the East Anglia TWO offshore cable corridor due to the distance between the nearest major haul-out site at Winterton-Horsey and the cable landfall at Sizewell, which is located over 60km along the coast

Site	184														
Name of European Site:	Yell Sound Coast SAC														
Distance to East Anglia TWO (km)	938														
Site Features	Likely effect(s) of East Anglia TWO														
	Under	water no	oise	Vesse	I Interact	ions	1	ct effects	on		es to wa	ter	In-combination		
							prey		quality						
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour Seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia TWO and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 185

Name of European Site: Ythan Estuary, Sands of Forvie and Meikle Loch SPA

Distance to East Anglia TWO 615

(km)

Site Features	Likely effect(s) of East Anglia TWO												
	Collision mortality			Displacement/Disturbance			Barrier E	ffect		Cumulative/In-combination			
	С	0	D	С	0	D	С	0	D	С	0	D	
Wintering and passage waterbird assemblage including as named features lapwing, eider, pink-footed goose, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)	
Breeding little tern, common tern, Sandwich tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	

- a) Survey data show little or no evidence of Ythan Estuary, Sands of Forvie & Meikle Loch SPA features occurring in the East Anglia TWO site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia TWO site.
- b) Little tern, common tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km and 54km respectively, so there is no connectivity between the SPA and East Anglia TWO site which are 608km apart. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded.
- c) The predicted effect attributable to East Anglia TWO is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Ythan Estuary, Sands of Forvie & Meikle Loch SPA.