

Habitat Regulations Assessment Appendix 2

Screening Matrices

Applicant: East Anglia ONE North Limited

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Glossary of Acronyms

AFL	Agreement for lease		
DCO	Development 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 ONE North 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 ONE North project	The proposed project consisting of up to 67 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 ONE North 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 ONE North 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 ONE North project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia ONE North 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 ONE North 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 convert it into a more 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 ONE North 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
	investigations, environmental and engineering surveys, diversion and laying of
	services, and highway alterations.
	, ,
Onshore substation	The East Anglia ONE North 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	ONE North project.
100dilon	ONE North projects
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.
	, gy
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
	offshore export cables and the onshore cables.
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1 Introduction

1. This document provides the Information to Support Appropriate Assessment Report screening matrices for the proposed East Anglia ONE North 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 ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	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 ONE North 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 ONE North Reference	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Number						
20	Berwickshire and North Northumberland Coast SAC		✓	✓		
21	Blackwater Estuary 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 SPA & Ramsar	✓				
36	Copinsay SPA	✓				
37	Coquet Island SPA	✓				
38	Côte de Granit Rose- Sept Iles SAC	✓	✓			



East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
39	Cromarty Firth SPA & Ramsar	✓				
40	Crouch and Roach Estuaries 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		√			
53	Estuaire de la Seine SCI		✓			
54	Estuaires et Littoral Picards (baies de Somme et d'Authie) SAC		✓		√	



East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
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	✓				
69	Foulness (Mid-Essex Coast Phase 5) SPA & Ramsar	✓				
70	Fowlsheugh SPA	✓				
71	Frisian Front SPA	✓				
72	Gibraltar Point SPA & Ramsar	√				



East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
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	Hamford Water SPA & Ramsar	✓				
80	Helgoland mit Helgoländer Felssockel SAC		✓			
81	Hermaness, Saxa Vord and Valla Field SPA	✓				
82	Hesselø med omliggende stenrev SAC		√			
83	Hirsholmene, havet vest herfor og Ellinge Å's udløb SAC		√			
84	Hornsea Mere SPA	✓				
85	Hoy SPA	✓				
86	Humber Estuary SAC		√	✓	✓	
87	Humber Estuary SPA & Ramsar	✓				
88	Hund und Paapsand SCI		✓			
89	Imperial Dock Lock, Leith SPA	✓				
90	Inner Dowsing, Race Bank and North Ridge SCI			√		



East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
91	Inner Moray Firth SPA & Ramsar	✓				
92	Isle of May SAC		✓			
93	Klaverbank SAC		✓			
94	Kosterfjorden- Väderöfjorden SAC		✓			
95	Kungsbackafjorden SAC		✓			
96	Küsten- und Dünenlandschaften Amrums SAC		✓			
97	Lindisfarne SPA & Ramsar	✓				
98	Littoral Seino-Marin SPA	✓				
99	Loch of Strathbeg SPA & Ramsar	✓				
100	Løgstør Bredning, Vejlerne og Bulbjerg SAC		✓			
101	Lovns Bredning, Hjarbæk Fjord og Skals, Simested og Nørre Ådal, Skravad Bæk SAC		√			
102	Malmöfjord SAC		✓			
103	Marais du Cotentin et du Bessin - Baie des Veys SAC		√			
104	Margate and Long Sands SCI			√		
105	Marwick Head SPA	✓				
106	Måseskär SAC		✓			
107	Medway Estuary and Marshes SPA & Ramsar	✓				



East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
108	Minsmere-Walberswick SPA & Ramsar	✓				
109	Montrose Basin SPA & Ramsar	✓				
110	Moray and Nairn Coast SPA & Ramsar	✓				
111	Mousa SPA	✓				
112	Mousa SAC		√			
113	Nationalpark Niedersächsisches Wattenmeer SAC		✓			
114	Nibe Bredning, Halkær Ådal og Sønderup Ådal SAC		✓			
115	Nidingen SAC		✓			
116	Noordzeekustzone SAC		✓	✓	✓	
117	Nordre älvs estuarium SAC		√			
118	Nordvästra Skånes havsområde SAC		√			
119	North Caithness Cliffs SPA	✓				
120	North Norfolk Coast SPA & Ramsar	✓				
121	North Norfolk Sandbanks and Saturn Reef SAC			✓		
122	Northumbria Coast SPA & Ramsar	✓				
123	Noss SPA	✓				



East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
124	NTP S-H Wattenmeer und angrenzende Küstengebiete SAC		✓			
125	Oosterschelde SAC		✓			
126	Orfordness - Shingle Street SAC			✓		
127	Östliche Deutsche Bucht SPA	✓				
128	Ouessant-Molène SAC		✓			
129	Outer Thames Estuary SPA	✓				
130	Papa Stour SPA	✓				
131	Papa Westray (North Hill and Holm) SPA	✓				
132	Pater Noster-skärgården SAC		✓			
133	Pentland Firth Islands SPA	✓				
134	Portsmouth Harbour SPA & Ramsar	✓				
135	Presqu'ile de Crozon SAC		✓			
136	Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA					
137	Récifs et marais arrière- littoraux du Cap Lévi à la Pointe de Saire SAC		√			
138	Récifs Gris-Nez Blanc- Nez SAC		✓	✓		



East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
139	Ridens et dunes hydrauliques du détroit du Pas-de-Calais SAC		✓	✓		
140	River Derwent SAC				✓	
141	Ronas Hill - North Roe and Tingon SPA	✓				
142	Rousay SPA	✓				
143	Sälöfjorden SAC		✓			
144	Sanday SAC		√			
145	Sandlings SPA	✓				✓
146	SBZ 1 / ZPS 1 SAC		✓			
147	SBZ 2 / ZPS 2 SAC	✓				
148	SBZ 3 / ZPS 3 SAC	✓				
149	Scanner Pockmark SAC			√		
150	Seevogelschutzgebiet Helgoland SPA	✓				
151	Skagens Gren og Skagerrak SAC		√			
152	Solent and Southampton Water SPA & Ramsar	✓				
153	Soteskär SAC		✓			
154	Southern North Sea SAC		✓			
155	St Abb`s Head to Fast Castle SPA	✓				
156	Staverton Park and the Thicks Wantisden SAC					✓
157	Steingrund SAC		✓			
158	Store Rev SCI		✓			



East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
159	Stour and Orwell Estuaries SPA & Ramsar	✓				
160	Strandenge på Læsø og havet syd herfor SAC		✓			
161	Sumburgh Head SPA	✓				
162	Sydlige Nordsø SAC		✓			
163	Sylter Außenriff SCI	✓	✓			
164	Teesmouth and Cleveland Coast SPA & Ramsar	✓				
165	Thames Estuary and Marshes SPA & Ramsar	✓				
166	Thanet Coast and Sandwich Bay SPA & Ramsar	√				
167	Thanet Coast SAC			✓		
168	The Swale SPA & Ramsar	✓				
169	The Wash and North Norfolk Coast SAC		✓	✓		
170	The Wash SPA & Ramsar	✓				
171	Tregor Goëlo SAC		✓			
172	Troup, Pennan and Lion`s Heads SPA	✓				
173	Unterems und Außenems SCI		✓			
174	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC		√			
175	Venø, Venø Sund SAC		✓			



East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
176	Vlaamse Banken SAC		✓	✓	✓	
177	Vlakte van de Raan SCI/SAC		✓		✓	
178	Voordelta SAC and SPA	✓	✓	✓	✓	
179	Vrångöskärgården SAC		✓			
180	Waddenzee SPA	✓				
181	Waddenzee SAC		✓	✓		
182	West Westray SPA	✓				
183	Westerschelde & Saeftinghe SAC		✓		√	
184	Winterton – Horsey Dunes SAC		✓			
185	Yell Sound Coast SAC		✓			
186	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: Abberton Reservoir SPA and Ramsar

Distance to East Anglia ONE North

113 (windfarm site)

(km)

()													
Site Features	Likely effect(s) of East Anglia ONE North												
	Collision mortality			Displace	Displacement/Disturbance			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 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 ONE North windfarm site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North windfarm site.
- b) Maximum foraging range of breeding cormorants from their colonies is 35km (Thaxter et al. 2012); the East Anglia ONE North 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 ONE North windfarm site in the non-breeding season as they mostly overwinter in freshwater habitat in southern England.





Site 1

Name of European Site: Abberton Reservoir SPA and Ramsar

c) The predicted effect attributable to East Anglia ONE North 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.

Site	2														
Name of European Site:	Abers -	bers - Côtes Des Legendes SAC													
Distance to East Anglia ONE North (km)	645 (win	5 (windfarm site)													
Site Features	Likely eff	Likely effect(s) of East Anglia ONE North													
	Underwa	Underwater noise Vessel Interactions				tions	Indired prey	ct effects	s on	Chang quality	ges to wa	ater	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)

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

potential for LSE.





Site	3														
Name of European Site:	Agger T	ange, N	lissum	Brednii	ng, Skib	sted Fjc	rd og A	gerø S <i>A</i>	C						
Distance to East Anglia ONE North (km)	619603														
Site Features	Likely ef	fect(s) o	of East /	Anglia O	NE Nort	h									
	Underw	ater no	ise	Vesse	l Interac	ctions	Indired prey	ct effects	s on	Chang quality	ges to w /	ater	In-cor	nbinatior	1
	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 i	mpact r	ange of	East An	glia ONI	E North a	and the e	extent of	any effe	ect on ind	dividuals	from thi	s site wo	ould resu	ılt in no

potential for LSE.





Site	4														
Name of European Site:	Ålborg E	Bugt, R	anders	Fjord o	g Maria	ger Fjor	d SAC								
Distance to East Anglia ONE North (km)	847														
Site Features	Likely eff	fect(s) c	of East /	Anglia O	NE Nort	h									
	Underw	ater noi	ise	Vesse	l Interac	tions	Indire prey	ct effects	s on	Chang quality	ges to wa	ater	In-con	nbinatior	1
	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 ir	npact ra	ange of	East An	glia ONI	E North a	and the	extent of	any effe	ct on inc	dividuals	from thi	s site wo	uld resu	ılt in no





Site	5																	
Name of European Site:	Alde,	Ore an	d Butle	y Estu	aries S	SAC												
Distance to East Anglia O	NE Nort	th (km)	: 3.4 (c	able c	orridor)												
Site Features	Likely	effect(s	s) of Ea	st Angl	ia ONE	North												
	Perma	inent lo	ess	physi	oorary cal bance		Smoth increa suspe sedim	ended	due to		nobilisa minateo nents			rwater i		In-coi	mbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Offshore habitats		'	'	'	'						'					'	'	
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	N	N (a)	N	N	N (a)	N	N	N (a)	N (a)	N	N	N	N	N	N	N (a)
Atlantic Salt Meadows a) Within range of the	. ,	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		_	





Name of European Site:	6 Alde-Ore l 3.2	Estuary S	SPA and F	≀amsar								
Site Features		ffect(s) of mortality	East Angl		lorth ement/Dist	urbance	Barrier	Effect		Cumula		
	С	0	D	С	0	D	С	0	D	combin	O	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 pugnax</i> , avocet, redshank <i>Tringa totanus</i>		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) Lesser black-backed gull populations may have connectivity with East Anglia ONE North. This SPA holds the closest large colony of these species to East Anglia ONE North, and some birds from that SPA may pass through East Anglia ONE North during migration. 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.
- d) Avocet has not been observed in the East Anglia ONE North windfarm site during bird surveys. It is highly unlikely that avocets from this SPA will migrate through the East Anglia ONE North 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 ONE North 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 ONE North site.
- f) Breeding Sandwich tern has a maximum foraging range of 54km from colonies, so would have connectivity with the East Anglia ONE North site. However, only very small numbers of terns of any species were observed in the East Anglia ONE North 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 ONE North windfarm site. It is highly unlikely that these birds would migrate through the East Anglia ONE North 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 ONE North site their flight height is likely not to be at collision risk height.
- h) The predicted effect attributable to East Anglia ONE North 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 ONE North. This SPA holds the closest large colony of these species to East Anglia ONE North, and some birds from that SPA may pass through East Anglia ONE North during migration





Site	7														
Name of European Site:	Anhol	t og hav	et nord	d for SA	С										
Distance to East Anglia ONE North (km)	907														
Site Features	Likely	effect(s)	of East	t Anglia	ONE No	rth									
	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)
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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





8														
Archip	oel des	Glénan	SAC											
768														
Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
Under	water no	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)
	Archip 768 Likely Under	Archipel des 0 768 Likely effect(s) Underwater no	Archipel des Glénan 768 Likely effect(s) of East Underwater noise C O D	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia Underwater noise C O D C	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE No Underwater noise Vessel Interact C O D C O	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions C O D C O D	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirectors C O D C O D C	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey C O D C O D C O D	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise	Archipel des Glénan SAC 768 Likely effect(s) of East Anglia ONE North Underwater noise

a) The distance between the potential impact range of East Anglia ONE North 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 ONE

199

North (km)

Marine Mammals

Site Features	Likely	effect(s)	of East	Anglia C	NE Nor	th									
	Under	water no	ise	Vessel	Interact	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	y effect	(s) of E	ast An	glia ON	IE Nort	h														
Features		anent at loss		phys	oorary ical rbance		to ind	thering 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	opean	Site:		Baie	e de Ca	nche e	et coul	oir des	trois e	estuaire	es SAC	;									
Distance to North (km)	East A	nglia	ONE	199																	
Site	Likel	y effec	t(s) of E	East An	glia ON	IE Nor	th	<u> </u>	<u>'</u>	_	<u>'</u>	<u>'</u>	<u>'</u>	<u>'</u>	<u>'</u>		<u>'</u>	_	<u>'</u>	<u>'</u>	
Features		nanent at loss		phys	porary ical rbance		to in	thering crease ended nent		of co	mobilisa ntamin nents			rwater /ibratio			romagr (EMF)		In-co	mbinati	on
	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 (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
River lamprey <i>Lampetra</i> <i>fluviatilis</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)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Allis shad <i>Alosa alosa</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)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)

a) It was agreed as part of the East Anglia ONE North 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.

potential for LSE.





Site	10														
Name of European Site:	Baie D	e Morla	ix SAC												
Distance to East Anglia ONE North (km)	595														
Site Features	Likely	effect(s)	of Eas	t Anglia (ONE No	rth									
	Under	vater no	oise	Vessel	Interacti	ons	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(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 o	of East A	nglia ON	IE North	and the	extent o	f any eff	ect on in	dividuals	from thi	s site wo	uld resu	It in no





Site	11														
Name of European Site:	Baie o	de Seine	Occid	entale S	AC										
Distance to East Anglia ONE North (km)	386														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water n	oise	Vessel	Interact	ions	Indired	t effects	on	Chang 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 ONE North 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 Seiı	ne Occ	cidentale	SPA							
Distance to East Anglia ONE North (km)	380											
Site Features		effect(. ,	ast Anglia Displace	a ONE No ement/Dis		Barrier	Effect		Cumu	ılative/In-combi	nation
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding, wintering and passage waterbirds		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 Baie de Seine Occidentale SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North site are extremely small.
- b) The predicted effect attributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Baie de Seine Occidentale SPA.





Site	13															
Name of European Site:	Baie de Seine Orientale SAC															
Distance to East Anglia ONE North (km)	386															
Site Features		effect(s water n	<i>,</i>		Anglia ONE North 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)	
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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.

potential for LSE.

potential for LSE.





Site 14 Name of European Site: **Baie du Mont Saint-Michel SAC Distance to East Anglia ONE** 903 North (km) Likely effect(s) of East Anglia ONE North Site Features Underwater noise **Vessel Interactions** Indirect effects on Changes to water In-combination quality prey С С 0 D С D С 0 D 0 D C 0 D Grey seal Halichoerus grypus N(a) Harbour seal Phoca vitulina N(a) N(a)

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

Site	15														
Name of European Site:	Balgö	SAC													
Distance to East Anglia ONE North (km)	903(
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indired	t effects	on	Chang	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 potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no





Site 16

Name of European

Bancs des Flandres SAC

Site:

Distance to East Anglia ONE North 110

(km)

Marine Mammals

Site Features	Likely	effect(s) o	f East An	glia ONE	North										
	Underv	vater nois	se	Vessel	Interaction	ons	Indirec	t effects o	on prey	Change quality	es to wate	er	In-comb	ination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> <i>phocoena</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	N(a)	N(a)	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)

Benthic Habitats

Site Features	Perm	anent lo	ss	physi	oorary cal bance		Smot increa suspe sedim	ended	ue to		nobilisat minate o nents			rwater n ibration	oise	In-cor	mbinatio	n
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered	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	16										
Name of European Site:	Band	cs des	Flandre	s SAC							
Distance to East Anglia ONE North (km)	110										
by sea water all the time											

- a) The distance between the potential impact range of East Anglia ONE North 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 17 Name of European Site: **Bassurelle Sandbank SAC Distance to East Anglia ONE** 203 North (km) Site Features Likely effect(s) of East Anglia ONE North Permanent loss Temporary physical Smothering due to Re-mobilisation of Underwater noise In-combination disturbance increased contaminated and vibration suspended sediments sediment 0 0 С D С 0 D С D С 0 С D С 0 D 0 D Ν Ν N (a) Sandbanks (a) (a) which are slightly covered by sea water all the time

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 18

Name of European Site: Benacre to Easton Bavents SPA

Distance to East Anglia ONE

19 (onshore cable corridor)

North (km)

NOITH (KIII)												
Site Features	Likely eff	ect(s) of E	East Anglia	a ONE No	rth							
	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 Great bittern Botarus stellaris		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Breeding Eurasian marsh harrier Circus aeruginosus		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Breeding Little tern Sterna albifrons		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)

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





Site 19 Benfleet & Southend Marshes SPA and Ramsar Name of European Site: 94 (cable corridor) **Distance to East Anglia ONE** North (km) Site Features Likely effect(s) of East Anglia ONE North Displacement/Disturbance Collision mortality **Barrier Effect** Cumulative/In-combination С 0 D С 0 D С 0 D С 0 D Wintering and passage waterbird N (a) N (a) N (a) N (a) N (a) N (a) N (b) N (b) N (b) N (a) assemblage including as named features brent goose Branta bernicla, dunlin Calidris alpina, knot Calidris canutus, ringed plover Charadrius hiaticula, grey plover Pluvialis squatarola

- a) Survey data show little or no evidence of Benfleet & Southend Marshes SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration.
- b) The predicted effect attributable to East Anglia ONE North 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 ONE** 414 (windfarm site) and 409 (offshore cable corridor) North (km) **Marine Mammals** Site Likely effect(s) of East Anglia ONE North **Features** Underwater noise Vessel Indirect effects on Changes to In-combination Interactions water quality prey 0 С 0 D С 0 D С 0 D С D С 0 D N(a) N(a) Grey seal N(a) Halichoerus grypus **Benthic Habitats** Temporary Smothering due Site Permanent loss Re-Underwater noise In-combination to increased Features physical mobilisation of and vibration suspended disturbance contaminate d sediment sediments С 0 С С D С 0 D С 0 С 0 D D 0 D 0 D N (b) Ν Ν N (b) N (b) N (b) Ν Ν Ν Ν Ν Ν N (b) Coastal Ν Ν Ν (b) (b) (b) (b) (b) (b) (b) lagoons (b) (b) (b) (b) Submerged N (b) N (b) Ν Ν N (b) N (b) N (b) Ν Ν Ν Ν Ν Ν Ν Ν Ν or partially (b) (b)





Site		20															
Name of Europe	ean Site:	Berw	ickshi	re and	North	Northu	ımberla	and Co	ast SA	C							
Distance to Eas North (km)	t Anglia ONE	414 (windfa	rm site	e) and	409 (ot	fshore	cable	corrid	or)							
submerged sea caves																	
•	ance between the posult in no potential fo		mpact	range c	of East	Anglia	ONE N	orth an	d the	extent	of any	/ effect	on indi	viduals	from this	site	
b) The dista	ance between the of	shore p	roject a	area an	d the d	lesigna	ted site	is bey	ond the	e rang	ge of a	ny pote	ential LS	SE.			





Site 21 **Blackwater Estuary SPA and Ramsar** Name of European Site: 114 **Distance to East Anglia ONE** North (km) Likely effect(s) of East Anglia ONE North Site Features Cumulative/In-Collision mortality Displacement/Disturbance **Barrier Effect** combination 0 C 0 D C 0 D С D С 0 D Wintering and passage waterbird N (a) N (f) N (f) N (f) assemblage including as named features brent goose, dunlin, ringed plover, blacktailed godwit Limosa limosa limosa, grey plover Nonbreeding hen harrier Circus cyaneus N (b) N (b) N (b) N (b) N (b) N (f) N (f) N (f) N (b) N (b) Breeding pochard N (c) N (c) N (f) N (f) N (f) N (c) N (c) N (c) N (c) N (c) N (d) N (d) N (f) N (f) Breeding ringed plover N (d) N (d) N (d) N (d) N (d) N (f)

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

N (e)

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

Breeding little tern

N (e)





- e) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia ONE North 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 ONE North site.
- f) The predicted effect attributable to East Anglia ONE North 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.

294





Site 22

Name of European

Borkum-Riffgrund (Borkum Reef Ground) SCI

Site:

Distance to East Anglia ONE North

(km)

	Mari	ine I	Vlamı	mals
--	------	-------	-------	------

Site Features	Likely e	ffect(s) of	f East An	glia ONE	North										
	Underw	ater nois	е	Vessel	Interactio	ns	Indirect	effects o	n prey	Change quality	s to wate	r	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	N (a)	N (a)	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 Features	_	nanent at loss		physi	oorary cal bance		Smoth increating suspensedim	nded	lue to		nobilisa ntamina ents			water i ibration		Electro fields	omagno (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





Twaite	N(b)																				
shad Alosa																					
fallax																					

- a) The distance between the potential impact range of East Anglia ONE North 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 ONE North 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 ONE North (km)	292											
Site Features	Likely effe	ct(s) of E	ast Anglia	ONE Nor	th							
	Collision n	nortality		Displace	ement/Dis	turbance	Barrier I	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> , red-throated 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 ONE North 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 ONE North 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 ONE** 737 North (km) Site Likely effect(s) of East Anglia ONE North Features In-combination Permanent loss Temporary physical Smothering due to Re-mobilisation of Underwater noise disturbance increased contaminated and vibration suspended sediments sediment 0 С 0 С 0 С 0 С 0 С С 0 D D D D D D N (a) Submarine structures made by leaking gases

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 ONE

North (km)

34

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dis	turbance	Barrier I	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 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 ONE North 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 ONE North windfarm site are likely to be extremely small relative to BDMPS.
- d) The predicted effect attributable to East Anglia ONE North 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 ONE 22

North (km)

Site Features	Likely effe	ect(s) of Ea	st Anglia O	NE North of	ffshore proj	ect area						
	Collision	mortality		Displacer	ment/Distur	bance	Barrier Ef	ffect		Cumulativ	e/In-combi	nation
	С	0	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 ONE North 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 ONE North 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

Nonbreeding common guillemots Uria

aalge and razorbills Alca torda





Site 27 Name of European Site: Bruine Bank (Brown Ridge) pSPA **Distance to East Anglia ONE** 53 North (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 0 С D С D 0 D С 0 D

N (c)

N (b)

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 ONE North site.

N (c)

N (c)

N (c)

N (c)

N (c)

N (d)

N (d)

N (d)

- 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 ONE North site on migration as it lies west rather than north of the pSPA. Therefore, displacement, disturbance and barrier effect at the East Anglia ONE North site will not be likely to affect birds on Bruine Bank pSPA.
- c) The predicted effect attributable to East Anglia ONE North 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

Breeding seabird assemblage,

including as named features kittiwake, shag *Phalacrocorax aristotelis*, fulmar, guillemot, herring gull *Larus argentatus*



28

С

0

N (a)

D



Name of European Site:

Distance to East Anglia ONE 611
North (km)

Site Features

Likely effect(s) of East Anglia ONE North

Collision mortality

Displacement/Disturbance

Barrier Effect

Cumulative/In-combination

С

N (a)

0

N (a)

D

N (a)

С

N (a)

0

N (a)

D

N (a)

С

N (b)

0

N (b)

D

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 ONE North site are likely to be very small relative to BDMPS.

b) The predicted effect attributable to East Anglia ONE North 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 ONE

North (km)

818

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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
Breeding seabird assemblage including as named features cormorant, fulmar <i>Fulmarus glacialis</i> , guillemot, kittiwake and great black-backed 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 ONE North site are likely to be small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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.





Site 30

Name of European Site: Cap Sizun SAC

Distance to East Anglia ONE
North (km)

Site Features Likely effect(s) of East Anglia ONE North

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

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

Site Name of European Site:		ey SAC	;												
Distance to East Anglia ONE North (km)	510														
Site Features	Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indirec prey	t effects	on	Change quality	es to wat	er	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 ONE North 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: 743 **Distance to East Anglia ONE** North (km) Site Features Likely effect(s) of East Anglia ONE North Underwater noise **Vessel Interactions** Indirect effects on Changes to water In-combination quality prey С 0 D С С D С С 0 0 D 0 0 D D Grey seal N(a) a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no

Site	33													
Name of European Site:	Chesi	il Beach	and The	Fleet SP	A & Rams	ar								
Distance to East Anglia ONE North (km)	386 (v	Likely effect(s) of East Anglia ONE North												
Site Features		Likely effect(s) of East Anglia ONE North												
		Collision	mortality		Displace	ement/Dis	turbance	Barrier I	Effect		Cumulat combina			
		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)	

a) Survey data show little or no evidence of Chesil Beach & The Fleet SPA feature (brent goose) occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.





b) The predicted effect attributable to East Anglia ONE North 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: Chi	chester ar	nd Langs	tone Harb	ours SP	A & Rams	ar							
Distance to East Anglia ONE 227 North (km)	(windfarn	n site) an	d 274 (ca	ble corrid	lor)								
Site Features	Likely et	ffect(s) of	East Angl	ia ONE N	orth								
	Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In- combination C. O. D. C. O. D. C. O. D.												
	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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North 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

Name of European Site: Colne Estuary SPA and Ramsar

Distance to East Anglia
ONE North (km)

103 (windfarm site) and 56 (offshore cable corridor)

• · · · · · · · · · · · · · · · · · · ·												
Site Features	Likely ef	fect(s) of	East Angl	ia ONE N	orth							
	Collision	mortality	,	Displace	ement/Dis	turbance	Barrier I	Effect		Cumulat combina		
	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 (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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) Survey data show no evidence of Colne Estuary SPA feature (redshank) occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- c) Survey data show no evidence of Colne Estuary SPA feature (hen harrier) occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- d) Survey data show no evidence of Colne Estuary SPA feature (pochard) occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.





Site 35

Name of European Site: Colne Estuary SPA and Ramsar

Distance to East Anglia 103 (windfarm site) and 56 (offshore cable corridor)

ONE North (km)

- e) Survey data show no evidence of Colne Estuary SPA feature (ringed plover) occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- f) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia ONE North 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 ONE North site.
- g) The predicted effect attributable to East Anglia ONE North 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 ONE North (km)	784											
Site Features	Likely e	effect(s) of	East Ang	lia ONE N	lorth							
	Collisio	n mortality	,	Displace	ement/Dis	turbance	Barrier I	Effect		Cumula		
	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 ONE North site are likely to be very small relative to BDMPS.

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





37 Site Name of European Site: **Coquet Island SPA Distance to East Anglia ONE** 410 North (km) Likely effect(s) of East Anglia ONE North Site Features Cumulative/In-Collision mortality Displacement/Disturbance **Barrier Effect** combination 0 D С 0 D С 0 D С С 0 D Breeding roseate tern Sterna dougallii, N (a) N (b) N (b) N (b) Arctic tern, common tern, Sandwich tern

- 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 ONE North site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Coquet Island SPA.

potential for LSE.





Site Name of European Site: Distance to East Anglia ONE North (km)	38 Côte I 557	De Gran	it Rose	-Sept-Ile	es SAC										
Site Features		Likely effect(s) of East Anglia ONE North 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
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	potentia	l impact	range	of East A	nglia ON	NE North	and the	extent o	of any eff	ect on in	dividuals	from th	is site wo	ould resu	lt in no

5.3.4 Information to Support AA – Screening Matrices





Site 39

Name of European Site: Cromarty Firth SPA & Ramsar

Distance to East Anglia ONE 713 (windfarm site) and 706 (offshore cable corridor)

North (km)

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ment/Dist	urbance	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 curlew, dunlin, grey-lag goose <i>Anser anser</i> , pintail, red-breasted merganser, whooper swan, bar-tailed godwit, oystercatcher <i>Haematopus ostralegus</i> , 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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North site are likely to be extremely small relative to BDMPS.
- c) Osprey has not been observed in the East Anglia ONE North site, and it is improbable than any ospreys from the SPA migrate through the East Anglia ONE North site.





Site 39

Name of European Site: Cromarty Firth SPA & Ramsar

Distance to East Anglia ONE 713 (windfarm site) and 706 (offshore cable corridor)

North (km)

d) The predicted effect attributable to East Anglia ONE North 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.

Site 40 Name of European Site: **Crouch and Roach Estuaries SPA & Ramsar Distance to East Anglia ONE** 124 (windfarm site) and 78 (offshore cable corridor) North (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/Incombination C 0 D С 0 D С 0 D С 0 D Nonbreeding brent goose N (a) N (c) N (c) N (c) Nonbreeding hen harrier 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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) Survey data show no evidence of Crouch & Roach Estuary SPA feature (hen harrier) occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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.

Site



41



Name of European Site:

Deben Estuary SPA & Ramsar

Distance to East Anglia ONE
North (km)

Site Features

Likely effect(s) of East Anglia ONE North

Collision mortality

Displacement/Disturbance

Barrier Effect

Cumulative/In-combination

Site Features	Likely eff	fect(s) of E	East Angli	a ONE No	orth							
	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 dark-bellied brent goose Branta bernicla bernicla		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Nonbreeding avocet		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 Deben Estuary SPA features (brent goose) occurring in the East Anglia ONE North site, and migrations of birds from the SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) Survey data show no evidence of avocets occurring within the East Anglia ONE North site, and numbers migrating through the site are likely to be negligible.
- c) The predicted effect attributable to East Anglia ONE North 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 SF	A & Rams	ar												
Distance to East Anglia ONE North (km)	115 (windf	arm site) a	ınd 68 (o	ffshore ca	ble corric	lor)									
Site Features	Likely	Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance Regrice Effect Cumulative/In combinati													
	Collisi	Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-cor													
	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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) The predicted effect attributable to East Anglia ONE North 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.

potential for LSE.





Site	43 Dogge	rhonk (eci												
Name of European Site:	Dogge	erbank	3CI												
Distance to East Anglia ONE North (km)	346														
Site Features	Likely	effect(s	of Eas	t Anglia	ONE No	rth									
	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 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 ONE North and the extent of any effect on individuals from this site would result in no

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Site	44														
Name of European Site:	Doggersbank SAC														
Distance to East Anglia ONE North (km)	216														
Site Features	Likely effect(s) of East Anglia ONE North														
	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 <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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.

Wintering and passage waterbird

assemblage including as named features curlew, dunlin, greylag goose,

wigeon, bar-tailed godwit, teal,

oystercatcher

Breeding osprey

Site



45

С

0

N (a)

N (b)

D



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

Distance to East Anglia ONE North (km)

Site Features

Likely effect(s) of East Anglia ONE North

Collision mortality

Displacement/Disturbance

Barrier Effect

Cumulative/Incombination

0

N (a)

N (b)

D

N (a)

N (b)

С

N (a)

N (b)

0

N (a)

N (b)

D

N (a)

N (b)

С

N (c)

N (b)

0

N (c)

N (b)

D

N (c)

N (b)

С

N (a)

N (b)

a) Survey data show little or no evidence of Dornoch Firth & Loch Fleet SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.

- b) Osprey has not been observed in the East Anglia ONE North site, and it is improbable than any ospreys from the SPA migrate through the East Anglia ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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:	Dornoch Firth and Morrich More SAC															
Distance to East Anglia ONE North (km)	760															
Site Features		effect(s)		t Anglia (ONE No		Indirect effects on Changes to water In-combination									
	Onderv	vator ric	5100	V C55C1	V COOCI III CI COLIOTIO			prey			quality			iii oomoination		
	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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	47														
Name of European Site:	Dråby	Vig SA	C												
Distance to East Anglia ONE North (km)	663														
Site Features	Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
	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	notential	impact	range (of Fast A	nalia ON	JF North	and the	extent c	f any eff	ect on in	dividuals	from th	is site wo	ould resu	ult in no

a) The distance between the potential impact range of East Anglia ONE North 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 ONE North (km)	48 Dünen 459	landsc	haft Sü	d-Sylt S	AC											
Site Features	Likely 6	effect(s)	of Eas	t Anglia (ONE No	rth										
	Underv	ly effect(s) of East Anglia ONE North erwater 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 o	of East A	nglia ON	NE North	and the	extent o	f any eff	ect on in	dividuals	from thi	s site wo	uld resu	lt in no	

potential for LSE.





Site 49 Name of European Site: **Dunes De La Plaine Maritime Flamande SAC** Distance to East Anglia ONE 134 (windfarm site) and 129 (offshore cable corridor) North (km) **Marine Mammals** Site Features Likely effect(s) of East Anglia ONE North Vessel Interactions Changes to water Underwater noise Indirect effects on In-combination quality prey 0 D 0 D 0 D С 0 D С 0 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** Site Features Permanent loss Re- mobilisation of Underwater noise and In-combination Temporary physical Smothering due to disturbance increased suspended contaminate d vibration sediment sediments 0 D С 0 С 0 D С 0 0 D D D 0 D N (b) Sandbanks which are slightly covered by sea water all the time N (b) N (b) N (b) N (b) N (b) Mudflats and sandflats N (b) not covered by seawater at low tide

Information to Support AA – Screening Matrices



Site 49

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

Distance to East Anglia ONE 134 (windfarm site) and 129 (offshore cable corridor)

North (km)

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

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





Site 50

Name of European Site: East Caithness Cliffs SPA

Distance to East Anglia ONE 735 (windfarm site) and 732 (offshore cable corridor)

Site Features	Likely ef	fect(s) of	East Angl	ia ONE N	orth							
	Collision	mortality		Displace	ement/Dis	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, guillemot, herring gull, puffin <i>Fratercula arctica</i> , razorbill, shag, fulmar and great black-backed gull		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding peregrine Falco peregrinus		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- 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 ONE North site are small relative to BDMPS.
- b) Peregrines breeding in the UK normally remain close to their breeding areas throughout the year, and are therefore very unlikely to migrate offshore.
- c) The predicted effect attributable to East Anglia ONE North 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

Name of European Site: Essex Estuaries SAC

Distance to East Anglia ONE

73 (offshore cable corridor)

Site Features	Likely	effect(s)	of East	Anglia (ONE No	rth												
	Perma	anent lo	SS	Temp physic disturb	cal		Smoth increa suspe sedim	nded	ue to		nobilisati minated ients			rwater n 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.





Site	51														
Name of European Site:	Essex	Estuar	ies												
Distance to East Anglia ONE North (km)	107 (w	indfarn	n site)												
Site Features	Likely 6	xely effect(s) of East Anglia ONE North													
	Underv	lerwater noise													
	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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices

potential for LSE.





Site	52														
Name of European Site: Distance to East Anglia ONE North (km)	Estuai SAC 187	ire De L	a Canc	he, Dune	es Picar	des Plac	quees Sı	ur L'anc	ienne Fa	alaise, Fo	oret D'ha	ardelot E	Et Falaise	e D'equi	hen
Site Features		Likely effect(s) of East Anglia ONE North 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 <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	potentia	l impact	range o	of East A	nglia ON	E North	and the	extent o	f any eff	ect on inc	dividuals	from thi	s site wo	uld resul	t in no

potential for LSE.





Site Name of European Site: Distance to East Anglia ONE North (km)	53 Estuai 356	re de la	a Seine	SCI											
Site Features							ı								
	Underv	ly effect(s) of East Anglia ONE North erwater noise													
	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 o	of East A	nglia ON	NE North	and the	extent o	f any eff	ect on in	dividuals	from thi	s site wo	ould resu	It in no

5.3.4 Information to Support AA – Screening Matrices





Site 54

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

Distance to East Anglia ONE 221 (windfarm site) and 199 (offshore cable corridor)

North (km)

Marine Mammals

Site Features	Likely e	ffect(s) of	f East An	glia ONE	North										
	Underw	ater nois	е	Vessel I	nteractio	ns	Indirect	effects or	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
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 Ea	ast Ang	lia ONE	North															
Features	Perm loss	anent h	nabitat	Temp physic distur	_		Smoth increa suspe sedim	nded	due to		iobilisa itamina ents			rwater r ibration			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
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) It was agreed as part of the East Anglia ONE North 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.

goose, dunlin, oystercatcher, blacktailed godwit, grey plover, Slavonian grebe *Podiceps auritus*, avocet





Site	55												
Name of European Site:	xe Estuary	SPA & R	lamsar										
Distance to East Anglia ONE North (km)	43 (windfa	rm site) a	nd 397 (of	fshore ca	able corri	dor)							
Site Features	Likely effect(s) of East Anglia ONE North												
	Collision	n 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	
Migratory waterbird assemblage including as named features brent		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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) The predicted effect attributable to East Anglia ONE North 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 ONE 827

North (km)												
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dis	turbance	Barrier	Effect		Cumula	ative/In-co	mbination
	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 ONE North 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 ONE North 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 ONE

North (km)

396

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dist	urbance	Barrier E	Effect		Cumula	tive/In-con	nbination
	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 ONE North 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





Site 57 Name of European Site: Falaise du Bessin Occidental SPA **Distance to East Anglia ONE** 396 North (km) Site Features Likely effect(s) of East Anglia ONE North Displacement/Disturbance Cumulative/In-combination Collision mortality **Barrier Effect** 0 0 D С D 0 D

have to fly further by flying around the East Anglia ONE North site rather than through the wind farm. However, in the context of a migration of over 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 ONE North 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 ONE North site towards breeding areas further north, but the area of foraging habitat lost to these birds if they avoid the East Anglia ONE North 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 ONE North site. Short-eared owls are more migratory, and sometimes cross the North Sea, but since this SPA is 445km from the East Anglia ONE North site, the chances of a short-eared owl from the SPA passing through the East Anglia ONE North 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 ONE North 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.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices







Site 58

Name of European Site:

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

Distance to East Anglia

162 (windfarm site) and 142 (offshore cable corridor)

ONE North (km)

Mar	ine N	lamı	mals
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Site Features	Likely	effect(s	s) of Eas	st Anglia	ONE N	lorth									
	Unde	rwater r	noise	Vesse Intera	el ictions		Indire prey	ct effec	ts on	Chan qualit	ges to v	vater	In-cor	mbinatio	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 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)

Benthic Habitats

Site Features	Perm	anent lo	OSS	physi	orary cal bance		increa	ended	lue to		nobilisat minate o nents			rwater r ibration		In-co	mbinati	on
	'' '' ''		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)
Mudflats and sandflats not covered by	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	58																	
Name of European Site:	Falai	ses du	Cran aเ	ıx Oeuf	s et du	Cap Gri	s-Nez,	Dunes	du Cha	telet, Ma	arais de	Tardin	ghen e	t Dunes	de Wis	sant S	AC	
Distance to East Anglia ONE North (km)	162 ((windfarm site) and 142 (offshore cable corridor)																
seawater at low tide																		
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 ONE North 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.

potential for LSE.





Site	59														
Name of European Site:	Faray	and Ho	Im of Fa	aray SA	С										
Distance to East Anglia ONE North (km)	820														
Site Features	Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
	Underv	water no	oise	Vessel	Interact	ions	Indirect 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
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 A	nglia ON	NE North	and the	extent c	f anv eff	ect on in	dividuals	from thi	is site wo	uld resu	lt in no





Site	60											
Name of European Site:	Farne Is	lands SP	4									
Distance to East Anglia ONE North (km)	483											
Site Features	Likely eff	ect(s) of E	East Anglia	a ONE Noi	rth							
	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 ONE North site are likely to be very small relative to BDMPS.

b) The predicted effect attributable to East Anglia ONE North 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 ONE

North (km)

922

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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
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 ONE North site are small relative to BDMPS.
- b) Dunlin, whimbrel and red-necked phalarope have not been observed migrating through the East Anglia ONE North 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 ONE North. Dunlin and whimbrel from Fetlar SPA migrate south, but are unlikely to pass through the East Anglia ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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 Fo	orth SPA 8	& Ramsar									
Distance to East Anglia ONE North (km)	509											
Site Features	Likely e	ffect(s) of	East Angl	ia ONE N	orth							
	Collision	n mortality	,	Displac	ement/Dis	turbance	Barrier	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 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 ONE North site during migration.

 Therefore, proportions of these populations migrating through the East Anglia ONE North site are likely to be extremely small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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.





63 Site

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

Distance to East Anglia ONE

North (km)

550

Site Features	Likely ef	fect(s) of l	East Angli	a ONE N	orth							
	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
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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North site.





- c) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia ONE North 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 ONE North site.
- d) The predicted effect attributable to East Anglia ONE North 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 Name of European Site: Distance to East Anglia ONE North (km)	SAG	C	∕ & Eden	ı Estuar	у										
Site Features	Likely e	effect(s)	of East A	Anglia Ol	NE North	1									
	Likely effect(Underwater					tions	Indired prey	ct effects	on	Chang quality	ges to wa	ater	In-com	bination	
	C O		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 ONE North 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

North (km)

Distance to East Anglia ONE

246

Site Features	Likely	effect(s) of	East An	glia ONE N	orth							
	Collisio	on mortality	У	Displac	ement/Dis	sturbance	Barrier	Effect		Cumula	ative/In-co	mbination
	С	0	D	С	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)

- a) Band model estimates of collision mortality indicate that LSE cannot be ruled out at the Screening stage.
- b) 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.
- c) The predicted effect attributable to the proposed East Anglia ONE North project is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Flamborough and Filey Coast SPA.
- d) Flamborough and Filey Coast SPA is 239km from East Anglia ONE North. Thaxter et al. (2012) report a mean foraging range of breeding gannets as 92.5km, and a maximum recorded distance of 590km. East Anglia ONE North 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 ONE 246

- 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 ONE North. 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 razorbills as 23.7km, 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 ONE North 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 ONE North 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 ONE North 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.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site Name of Eu Distance to North (km)			E		_	Head Sa												
Site	Likely 6	effect(s)	of East	Anglia O	NE Nort	h												
Features	Perma	anent los	SS	Temp disturb	orary ph pance	nysical	Smoth increa suspe sedim	nded	ue to		obilisation minated ents	on of		water n ibration	oise	In-cor	nbinatior	า
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Submerged or partially submerged sea caves	N (a)	N (a)	N (a)	N (a)	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 67	,												
Name of European Site: Fo	orth Island	s SPA											
Distance to East Anglia ONE 51 North (km)	4												
Site Features	Likely ef	fect(s) of	East Angli	ia ONE No	orth								
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumulat	cumulative/In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	
Breeding seabird assemblage including 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		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)	

- 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 ONE North site are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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	i8											
Name of European Site:	oula SPA											
Distance to East Anglia ONE North (km)	001											
Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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 <i>Oceanodroma leucorhoa</i> , 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 ONE North site are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Foula SPA.

Site	69											
Name of European Site:	Foulness SPA and Ramsa	Iness SPA and Ramsar										
Distance to East Anglia ONE North (km)	113 (windfarm site) and 69	9 (offshore cable corridor)										
Site Features	Likely effect(s) of East A	nglia ONE North										
	Collision mortality	Displacement/Disturbance	Barrier Effect	Cumulative/In-combination								





Site	69												
Name of European Site:	Foulness	oulness SPA and Ramsar											
Distance to East Anglia ONE North (km)	113 (wind	13 (windfarm site) and 69 (offshore cable corridor)											
	С	0	D	С	0	D	С	0	D	С	0	D	
Wintering and passage waterbird assemblage including as named features brent goose, knot, oystercatcher, bar-tailed godwit, grey plover, avocet, redshank		N (a)		N (a)	N (e)	N (e)	N (e)						
Nonbreeding hen harrier		N (b)		N (b)	N (e)	N (e)	N (e)						
Breeding ringed plover, avocet		N (c)		N (c)									
Breeding little tern, common tern, Sandwich tern		N (d)		N (d)									

- a) Survey data show little or no evidence of Foulness SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration.
- b) Survey data show no evidence of hen harrier occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North site their flight height is likely not to be at collision risk height.
- 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 ONE North site. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded.

Information to Support AA – Screening Matrices



Site 69

Name of European Site: Foulness SPA and Ramsar

Distance to East Anglia ONE 113 (windfarm site) and 69 (offshore cable corridor)

North (km)

e) The predicted effect attributable to East Anglia ONE North 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 70

Name of European Site: Fowlsheugh SPA

Distance to East Anglia ONE

575

Site Features	Likely ef	Likely effect(s) of East Anglia ONE North											
	Collision	mortality		Displace	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 (a)	N (a)	N (a)	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 ONE North site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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 ONE

154

Site Features	Likely ef	Likely effect(s) of East Anglia ONE North											
	Collision	mortality		Displace	Displacement/Disturbance Barrie			ffect		Cumulative/In-combination			
	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 ONE North site during migration relative to the size of BDMPS regional populations.
- b) The predicted effect attributable to East Anglia ONE North 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	2											
Name of European Site:	Gibraltar	braltar Point SPA and Ramsar											
Distance to East Anglia ONE North (km)	151 (wind	(windfarm site) and 131 (offshore cable corridor)											
Site Features	Likely 6	Likely effect(s) of East Anglia ONE North											
	Collisio	n mortality	,	Displacement/Disturbance			Barrier	Barrier 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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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	3										
Name of European Site:	Great Yarr	eat Yarmouth and North Denes SPA										
Distance to East Anglia ONE North (km)	33											
Site Features	Likely et	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumulat	ive/In-con	nbination
	С	O D C O D C O 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 ONE North 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 ONE North 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.





Site 74

Name of European Site: Greater Wash SPA

Distance to East Anglia ONE 39 (offshore windfarm site) and 32 (offshore cable corridor)

Site Features	Likely ef	Likely effect(s) of East Anglia ONE North										
	Collision mortality		Displace	Displacement/Disturbance			Barrier Effect			Cumulative/In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabirds (little tern, common tern, Sandwich tern)		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Nonbreeding red-throated diver		N (b)		Y (c)	Y (i)	N (d)	N (b)	N (b)	N (b)	Y (c)	Y (i)	N (h)
Nonbreeding little gull		Y (e)		N (f)	N (f)	N (f)	N (f)	N (f)	N (f)	N (h)	Y (e)	N (h)
Nonbreeding common scoter		N (g)		N (g)	N (g)	N (g)	N (g)	N (g)	N (g)	N (h)	N (h)	N (h)

- 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 ONE North site. However, the tern colonies are at locations along the Norfolk coast which are beyond these foraging distances from the East Anglia ONE North site. Therefore, connectivity between the SPA and East Anglia ONE North 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.
- b) Red-throated divers fly close to the sea surface and are therefore at extremely low risk of collisions or barrier effects.
- 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 ONE North will be negligible compared to the current baseline.
- e) There is potential for little gull connectivity between the SPA and the East Anglia ONE North site, therefore LSE cannot be ruled out at screening for collision risk impacts to nonbreeding little gull.

Information to Support AA – Screening Matrices



Site 74

Name of European Site: Greater Wash SPA

Distance to East Anglia ONE 39 (offshore windfarm site) and 32 (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 ONE North 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 ONE North 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.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site Name of European Site: Distance to East Anglia ONE North (km)	75 Gule F 636	Rev SCI													
Site Features		effect(s water no		t Anglia (Vessel	ONE No Interact		Indired	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 potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site:	76 Gullm	arsfjord	den SA(;											
Distance to East Anglia ONE North (km)	855														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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 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 ON	VE North	and the	extent o	f any eff	ect on in	dividuals	from thi	s site wo	uld resu	lt in no

potential for LSE.





Site 77

Name of European Site: Haisborough, Hammond and Winterton SAC

Distance to East Anglia ONE

22 (windfarm site) and 35 (offshore cable corridor)

North (km)

Site	Likely 6	effect(s)	of East /	Anglia O	NE North	n												
Features	1000,	nent roductio diment	n of	Tempo disturba	rary phy ance	/sical		ering du sed susp ent		Re- mo contam sedime		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	N (a)	N (a)	N (a)	N (a)	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) Within range of theoretical indirect effect (sediment deposition) but effect negligible. Features are primarily sedimentary.





Site Name of European Site:	78 Hamb	urgisch	nes Wat	tenmeer	SCI										
Distance to East Anglia ONE North (km)	419														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water n	oise	Vessel	Interact	ions	Indired	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	N(a)	N(a)	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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	79											
Name of European Site:	Hamford V	Vater SPA	and Ram	nsar								
Distance to East Anglia ONE North (km)	86 (windfa	rm site) a	nd 38 (ca	ble corric	lor)							
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dis	turbance	Barrier I	Effect		Cumula	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 teal, brent goose, ringed plover, black-tailed godwit, grey plover, avocet, 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		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 Hamford Water SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration.
- b) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the East Anglia ONE North 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 ONE North site.
- c) The predicted effect attributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Hamford Water SPA and Ramsar.

potential for LSE.





Site	80														
Name of European Site:	Helgo	land mi	it Helgo	lander F	elssock	el SAC									
Distance to East Anglia ONE North (km)	405														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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 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	l impac	t range	of East A	nglia ON	NE North	and the	extent c	of any ef	ect on in	dividuals	from thi	s site wo	uld resu	It in no





Site	31											
Name of European Site:	Hermanes	s, Saxa V	ord and V	alla Field	SPA							
Distance to East Anglia ONE North (km)	946											
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dis	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 gannet, guillemot, red-throated diver, puffin, fulmar, kittiwake, great skua, shag		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	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 ONE North site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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.





Site	82	le:		anda at		.									
Name of European Site:	nesse	ıø mea	omilgg	ende ste	enrev S <i>i</i>	40									
Distance to East Anglia ONE North (km)	983														
Site Features	Likely	effect(s)	of East	t Anglia (ONE No	rth									
	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)
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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site:	83 Hirsho	olmene,	havet	vest her	for og E	llinge Å'	s udløb	SAC							
Distance to East Anglia ONE North (km)	814														
Site Features	Likely	effect(s	of Eas	t Anglia	ONE No	rth									
	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)
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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	84											
Name of European Site:	Hornsea N	lere SPA										
Distance to East Anglia ONE North (km)	234											
Site Features	Likely e	ffect(s) of	East Angli	ia ONE No	orth							
	Collision	n mortality		Displace	ement/Dis	turbance	Barrier I	Effect		Cumulat	tive/In-cor	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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) The predicted effect attributable to East Anglia ONE North 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 85

Name of European Site: Hoy SPA

Distance to East Anglia ONE 787

North (km)

,												
Site Features	Likely eff	fect(s) of E	East Anglia	a ONE No	orth							
	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 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 ONE North 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 ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Hoy SPA.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site Name (Distant North (Marine	ce to (km)	East				mber E		SAC ite) and	173 (c	offsh	ore ca	ible co	orrid	lor)									
Site Fe			ikely e	ffect(s)	of East	Anglia (ONE N	lorth															
				rater no		Ve	ssel Ir	nteraction			Indired	t effec	cts o	n prey	C	hang	es to	water	· qualit	y I	n-combi	nation	
		С	;	0	D	С	C)	D		С	0	D		C	;	0	D		(0	D
Grey se	eal	Υ	(a)	Y (a)	Υ (а	a) Y	(a) Y	' (a)	Y (a)		Y (a)	Y(a)	Υ	(a)	Y	(a)		Υ (a))	/ (a)	Y (a)	Y (a)
Fish																							
Site	Like	ly effe	ct(s) o	f East A	nglia O	NE Nor	th																
Featu res		maner itat los		phys	oorary ical rbance		to ind	thering of creased ended nent	due	of c	- mobili contam liments	inated		Unde and v					magn (EMF)	etic	In-c	ombina	ion
	С	0	D	С	0	D	С	0	D	С	0	D		С	0	D	С		0	D	С	0	D
Sea Lamp rey	N(b)	N(b)	N(b)	N(b	N(b)	N(b)	N(b)	N(b)	N(b)	N(b) N(I	b) N	(b)	N(b)	N(b)	N() N	(b)	N(b)	N(b)	N(b) N(b) N(b
River lampr ey	N(b)	N(b)	N(b)	N(b	N(b)	N(b)	N(b)	N(b)	N(b)	N(b) N(I	b) N	(b)	N(b)	N(b)	N() N	(b)	N(b)	N(b)	N(b) N(b) N(b

Information to Support AA – Screening Matrices



Site 86

Humber Estuary SAC

Name of European Site:

Distance to East Anglia ONE

179 (windfarm site) and 173 (offshore cable corridor)

North (km)

Benthic habitats

Site Features	Pern	nanen	nt loss	Tempo physica disturba	al		increa	ended	due to	of co	mobilisa ntamin nents		Unde vibrat	rwater no	oise and	In-com	binatio	n
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Estuaries	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)						
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)						
Coastal lagoons	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) 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 ONE North 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 87

Name of European Site: **Humber Estuary SPA and Ramsar**

Distance to East Anglia ONE 179 (windfarm site) and 173 (offshore cable corridor)

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulat	ive/In-cor	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird 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 <i>Tringa nebularia</i>		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 bittern		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (g)	N (g)	N (g)
Breeding marsh harrier		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)
Breeding avocet		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)

Information to Support AA – Screening Matrices



Site 87

Name of European Site: Humber Estuary SPA and Ramsar

Distance to East Anglia ONE 179 (windfarm site) and 173 (offshore cable corridor)

North (km)

- a) Survey data show little or no evidence of Humber Estuary SPA features occurring in the East Anglia ONE North sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration.
- b) Survey data show no evidence of Humber Estuary SPA feature hen harrier occurring in the East Anglia ONE North sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North 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 ONE North. 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 ONE North site.
- g) The predicted effect attributable to East Anglia ONE North 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:	88 Hund t 323	und Paa	ıpsand	SCI											
Distance to East Anglia ONE North (km)	323														
Site Features	Likely 6	effect(s)	of East	t Anglia (ONE No	th									
	Underv	vater no	ise	Vessel	Interacti	ons	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 89 Name of European Site: Imperial Dock Lock, Leith SPA **Distance to East Anglia ONE** 532 North (km) Likely effect(s) of East Anglia ONE North Site Features Collision mortality Displacement/Disturbance Cumulative/In-combination **Barrier Effect** С 0 D С 0 С 0 D С 0 D D Breeding common tern 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 ONE North are small relative to BDMPS.

b) The predicted effect attributable to East Anglia ONE North 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 90 Name of European Site: Inner Dowsing, Race Bank and North Ridge SCI 110 (cable corridor) **Distance to East Anglia ONE** North (km) Site Likely effect(s) of East Anglia ONE North Features Smothering due to Re- mobilisation of Underwater noise In-combination Temporary physical Permanent loss disturbance increased and vibration contaminated suspended sediments sediment С С С 0 D 0 D С 0 D С 0 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.

goldeneye, greylag goose, redshank, wigeon, goosander, teal, red-breasted merganser, cormorant, oystercatcher,

scaup

Breeding osprey

Breeding common tern





Site 91 Name of European Site: **Inner Moray Firth SPA & Ramsar Distance to East Anglia ONE** 701 (windfarm site) and 696 (offshore cable corridor) North (km) Likely effect(s) of East Anglia ONE North Site Features Displacement/Disturbance Cumulative/In-combination Collision mortality **Barrier Effect** С 0 D С С С 0 0 0 D D D Wintering and passage waterbird N (a) N (a) N (a) N (d) N (d) N (d) N (a) N (a) N (a) N (a) assemblage including as named features bar-tailed godwit, curlew,

a) Survey data show little or no evidence of Inner Moray Firth SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA and Ramsar are likely to result in negligible numbers passing through the East Anglia ONE North site.

N (b)

N (c)

N (b)

N (d)

N (b)

N (d)

N (b)

N (d)

b) Osprey has not been observed in the East Anglia ONE North site, and it is extremely unlikely that any ospreys from the Inner Moray Firth SPA migrate through the East Anglia ONE North site.

N (b)

N (c)

N (b)

N (c)

- 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 ONE North site is likely to be extremely small relative to BDMPS.
- d) The predicted effect attributable to East Anglia ONE North 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 ONE North (km)	92 Isle of 524	May S <i>i</i>	/C												
Site Features	_	effect(s) water no			ONE No		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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	93														
Name of European Site:	Klaverbar	nk SCI													
Distance to East Anglia ONE North (km)	158														
Site Features	Likely effe	ct(s) of Ea	st Anglia C	NE Nor	h										
	Underwate	er noise		Vesse	el Intera	ctions	Indired prey	ct effect	s on	Chang quality	es to wa	ater	In-con	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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site Name of European Site:	94 Koste	rfjordeı	n-Väder	öfjorder	SAC											
Distance to East Anglia ONE North (km)	867															
Site Features	Likely	g														
	Under															
	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)	





Site Name of European Site: Distance to East Anglia ONE North (km)	95 Kungs 881	sbackaf	jorden :	SAC											
Site Features	Likely	ly effect(s) of East Anglia ONE North erwater noise													
	Under	water no	oise	Vessel	Interacti	ions	Indired	t effects	on	Chang quality		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 the pro	posed p	roject ar	nd the si	te is bey	ond that	of poten	tial for di	rect or ir	ndirect ef	fects.	

Name of European Site: Distance to East Anglia ONE North (km)	96 Küster 456	ո- und [Dünenla	ındscha	ften Am	rums S <i>l</i>	/C								-
Site Features		ely effect(s) of East Anglia ONE North 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)





Site	97											
Name of European Site:	Lindisfarn	e SPA an	d Ramsar									
Distance to East Anglia ONE North (km)	441 (windf	arm site)	and 435 (offshore	cable cor	ridor)						
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	reffect(s) of East Anglia ONE North ion mortality										
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird 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		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding little tern, roseate 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 ONE North 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 ONE North. 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 ONE North site. Breeding roseate tern has a maximum foraging range of 30km from colonies, so would have no connectivity with East Anglia ONE North. Migrating roseate terns are unlikely to pass through the East Anglia ONE North site as their migration tends to be coastal.

Information to Support AA – Screening Matrices



Site 97

Name of European Site: Lindisfarne SPA and Ramsar

Distance to East Anglia ONE 441 (windfarm site) and 435 (offshore cable corridor)

North (km)

c) The predicted effect attributable to East Anglia ONE North 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.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site 98

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

Distance to East Anglia ONE 261 North (km)	_											
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dist	turbance	Barrier l	Effect		Cumula	tive/In-cor	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 <i>Stercorarius pomarinus</i> , great skua, Mediterranean gull <i>Larus melanocephalus</i> , 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 98

Name of European Site: Littoral Seino-Marin SPA

Distance to East Anglia ONE 261

North (km)

Nonbreeding woodlark *Lullula arborea* N (e) N (

- a) East Anglia ONE North 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 ONE North. 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 ONE North are likely to be extremely small relative to BDMPS.
- b) Proportions of these populations migrating through the East Anglia ONE North 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 ONE North site. It is unlikely that birds from the SPA will migrate through the East Anglia ONE North 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 ONE North 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 ONE North site.
- f) The predicted effect attributable to East Anglia ONE North 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 99

Name of European Site: Loch of Strathbeg SPA & Ramsar

Distance to East Anglia ONE 638

North (km)

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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 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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North site is likely to be extremely small relative to BDMPS.
- c) The predicted effect attributable to East Anglia ONE North 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	100				5.00	0.10									
Name of European Site:	Løgst	ør Bred	nıng, v	ejlerne c	og Bulbj	erg SAC									
Distance to East Anglia ONE North (km)	673														
Site Features	Likely														
	Under	ely effect(s) of East Anglia ONE North 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)

a) The distance between the potential impact range of East Anglia ONE North 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 ONE North (km)	101 Lovns 699	Lovns Bredning, Hjarbæk Fjord og Skals, Simested og Nørre Ådal, Skravad Bæk SAC														
Site Features		effect(s) vater no			ONE Nor Interacti		Indirect effects on prey Changes to water quality						In-com	mbination		
	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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site Name of European Site:	102 Malmö	ifjord S	AC												
Distance to East Anglia ONE North (km)	859														
Site Features		Likely effect(s) of East Anglia ONE North Underwater noise										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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site	103	103													
Name of European Site:	Marais	Marais du Cotentin et du Bessin - Baie des Veys SAC													
Distance to East Anglia ONE North (km)	407														
Site Features Likely effect(s) of East Anglia ONE North															
	Under	water no	oise	Vessel Interactions			Indirect effects on prey			Change quality	es to wa	ter	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 <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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 104 **Margate and Long Sands SCI** Name of European Site:

Distance to East Anglia ONE 37 (cable corridor)

Site	Likely 6	effect(s)	of East A	Anglia O	NE Nort	h												
Features	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.

as named features guillemot and

kittiwake





Site 105 Name of European Site: **Marwick Head SPA Distance to East Anglia ONE** 822 North (km) Likely effect(s) of East Anglia ONE North Site Features Displacement/Disturbance Cumulative/In-combination Collision mortality **Barrier Effect** С 0 С 0 D С 0 С D 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)

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 ONE North site are small relative to BDMPS.

N (a)

b) The predicted effect attributable to East Anglia ONE North 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:	106 Måses	kär SA	С													
Distance to East Anglia ONE North (km)	847															
Site Features Likely effect(s) of East Anglia ONE North																
	Under	water no	oise	Vessel	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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.

Distance to East Anglia ONE North





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

107

Name of European Site. Medway Estuary & Maisiles SFA and Ramsar

(km)

Site

147 (windfarm site) and 102 (offshore cable corridor)

Site Features	Likely eff	Likely effect(s) of East Anglia ONE North													
	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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North 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 ONE North. 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 ONE North site. Breeding common tern has a maximum foraging range of 30km from colonies





Site 107

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

(Thaxter et al. 2012), so would have no connectivity with East Anglia ONE North. Migrating common terms are unlikely to pass through the East Anglia ONE North site as their migration tends to be coastal where that is an option.

d) The predicted effect attributable to East Anglia ONE North 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	108														
Name of European Site:	Minsmer	e - Walbe	rswick SF	PA and Ra	msar										
Distance to East Anglia ONE North (km)	44 (wind	farm site)	and 2 (of	fshore cal	ble corrid	or)									
Site Features	Likely ef	fect(s) of E	ast Angli	a ONE No	rth										
	Collision	ely effect(s) of East Anglia ONE North ision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination													
	С	O D C O D C O D C O D													
Wintering shoveler, gadwall, white-fronted goose		O D C O D C O D C O D N (a) N (b) N (c) N													
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 108

Name of European Site: Minsmere - Walberswick SPA and Ramsar

Distance to East Anglia ONE 44 (windfarm site) and 2 (offshore cable corridor)

- a) Survey data show no evidence of Minsmere-Walberswick SPA features shoveler, gadwall or white-fronted goose occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) Survey data show no evidence of hen harrier occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- d) Survey data show no evidence of nightjar occurring in the East Anglia ONE North OWF sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North. 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 ONE North site.
- g) The predicted effect attributable to East Anglia ONE North 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	109	•													
Name of European Site:	Мо	ntros	е Ва	sin SPA &	Ramsar										
Distance to East Anglia ONE North (km)	570) (win	dfarr	n site) and	d 567 (offs	hore cable	corri	dor)							
Site Features	Lik	ely eff	ect(s) of East A	nglia ONE	North									
		ely effect(s) of East Anglia ONE North lision Displacement/Disturbance Barrier Effect Cumulative/In-combination rtality													
	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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.

b) The predicted effect attributable to East Anglia ONE North 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 110

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

Distance to East Anglia ONE 669 (windfarm site) and 666 (offshore cable corridor)

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	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, 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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) Osprey has not been observed in the East Anglia ONE North site, and it is improbable that any ospreys from the SPA migrate through the East Anglia ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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.

Breeding Arctic tern

Hydrobates pelagicus

Breeding European storm-petrel



С

0

N (a)

N (b)

D



С

N (c)

N (b)

0

N (c)

N (b)

D

N (c)

N (b)

Name of European Site: Mousa SPA

Distance to East Anglia ONE North (km)

Site Features

Likely effect(s) of East Anglia ONE North

Collision mortality

Displacement/Disturbance

Barrier Effect

Cumulative/In-combination

С

N (a)

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 ONE North site is likely to be extremely small relative to BDMPS.

0

N (a)

N (b)

С

N (a)

N (b)

0

N (a)

N (b)

D

N (a)

N (b)

D

N (a)

N (b)

- b) European storm-petrels were not observed in the East Anglia ONE North 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 ONE North 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 ONE North (km)	112 Mousa 872	a SAC													
Site Features	Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indired	t effects	on	Change	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 ONE North 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 ONE North (km)	113 Natio 304	nalpark	Nieder	sächsisc	ched Wa	ttenmee	er SAC								
Site Features		effect(s water n	,	t Anglia Vessel	ONE No Interact		Indirec	t effects	on	Change	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)
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)

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





Site 114 Nibe Bredning, Halkær Ådal og Sønderup Ådal SAC Name of European Site: 705 **Distance to East Anglia ONE** North (km) Likely effect(s) of East Anglia ONE North Site Features In-combination Underwater noise **Vessel Interactions** Indirect effects on Changes to water quality prey С 0 D С 0 D С 0 D С 0 D C 0 D Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia ONE North 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 ONE North (km)	115 Niding 886	jen SA(;												
Site Features		effect(s) water no		t Anglia (ONE No Interact			t effects	on	_	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	prey	0	D	quality C	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)	U	N(a)	N(a)	N(a)	N(a)

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





Site 116

Name of European Site: Noordzeekustzone SAC

Distance to East Anglia ONE

140 (windfarm site) and 159 (offshore cable corridor)

North (km)

		_	-			
N	larir	NO N	ЛЭ	m	m	ale.
IV	ıaııı		па			aio.

Site Features	Likely (effect(s)	of East Ar	nglia ONE	North										
	Underv	water nois	se		Interaction		Indirect	effects o	n prey	Change quality	s to wate	er	In-com	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 ONE	North															
Features	Perma habita			Temp physic distur	cal		Smoth increa suspe sedim	ended	due to	_	nobilisa ntamina nents			rwater i ibration			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(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)
Allis 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)
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)





Site 116

Name of European Site: Noordzeekustzone SAC

Distance to East Anglia ONE 140 (windfarm site) and 159 (offshore cable corridor)

North (km)

Benthic Habitats

Site Features	Perma	anent l	oss	Temp physic distur							obilisat tamina ents			rwater i 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(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)
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)	N(b)	N(b)

- a) It was agreed as part of the East Anglia ONE North 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.
- 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.

potential for LSE.

potential for LSE.





117 Site Nordre älvs estuarium SAC Name of European Site: 851 **Distance to East Anglia ONE** North (km) Site Features Likely effect(s) of East Anglia ONE North Underwater noise **Vessel Interactions** Indirect effects on Changes to water In-combination quality prey С С 0 D С 0 D С 0 D 0 D C 0 D Harbour seal Phoca vitulina N(a) a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no

Site Name of European Site: Distance to East Anglia ONE North (km)	118 Nordv 955	rästra S	ikånes I	navsomr	åde SA	C									
Site Features		effect(s water n		t Anglia Vessel	ONE No Interact		Indired	ct effects	on	Chang	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	C	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 Ol	NE North	and the	e extent o	of any ef	fect on in	dividuals	from th	is site wo	uld resu	ılt in no





Site 119

Name of European Site: **North Caithness Cliffs SPA**

Distance to East Anglia ONE North

761

(km)

Site Features	Likely eff	fect(s) of I	East Anglia	a ONE No	orth							
	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 fulmar, guillemot, kittiwake, razorbill, puffin		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) 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 ONE North 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 ONE North 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 120

Name of European Site: North Norfolk Coast SPA and Ramsar

Distance to East Anglia ONE 93 (windfarm site) and 100 (offshore cable corridor)

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dist	turbance	Barrier I	Effect		Cumula	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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration.
- b) Survey data show no evidence of North Norfolk Coast SPA feature bittern occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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.

Information to Support AA – Screening Matrices



Site 120

Name of European Site: North Norfolk Coast SPA and Ramsar

Distance to East Anglia ONE 93 (windfarm site) and 100 (offshore cable corridor)

- d) Survey data show no evidence of North Norfolk Coast SPA feature avocet occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- 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 ONE North 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 ONE North 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 121

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

Distance to East Anglia ONE 69 (offshore cable corridor)

Site	Likely 6	effect(s)	of East A	Anglia Ol	NE North	า												
Features	Permai	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	122														
Name of European Site:	Northumk	ria Coast	SPA and	Ramsar											
Distance to East Anglia ONE North (km)	347 (wind	affarm site) and 340 (offshore cable corridor)													
Site Features	Likely e	effect(s) of East Anglia ONE North													
	Collisio	n mortality	′	Displace	ement/Dis	turbance	Barrier	Effect		Cumula					
	С	0	D	С	0	D	С	0	D	С	0	D			
Nonbreeding turnstone, purple sandpiper <i>Calidris maritima</i>		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 ONE North 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 ONE North. 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 ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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 123

Name of European Site: **Noss SPA**

Distance to East Anglia ONE

881

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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 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 ONE North are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Noss SPA.

phocoena

Grey seal Halichoerus grypus

Harbour seal Phoca vitulina



N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)



Site 124 NTP S-H Wattenmeer und angrenzende Kustengebiete SAC Name of European Site: 419 **Distance to East Anglia ONE** North (km) Likely effect(s) of East Anglia ONE North 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) N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

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: Distance to East Anglia ONE North(km)	125 Ooste 109	rscheld	le SAC												
Site Features		effect(s water n	,	t Anglia Vessel	ONE No Interact		Indirec	t effects	on	Change	es to wat	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)
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 126 Name of European Site: **Orfordness - Shingle Street SAC** 4 (offshore cable corridor) **Distance to East Anglia ONE** North (km) Likely effect(s) of East Anglia ONE North Site Features Permanent loss Temporary physical Smothering due to Re-mobilisation of Underwater noise In-combination disturbance and vibration increased contaminated suspended sediments sediment 0 С 0 С 0 С 0 С 0 С 0 С D D D D D D N (a) Coastal lagoons

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.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site ·	127													
Name of European Site:	Östliche [Deutsche l	Bucht SF	PA										
Distance to East Anglia ONE North (km)	411													
Site Features	Likely e	ffect(s) of	East Ang	lia ONE N	lorth									
	Collision	n mortality		Displace	ement/Dis	turbance	Barrier	Effect	_	Cumula	ative/In-co	mbination		
	С	0	D	С	0	D	С	0	D	С	0	D		
Ornithology		N (a) N (a) N (b) N (b) N (b)												
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 (a) N (b) N (b)												
 a) Migrations of birds from this S size of BDMPS regional popul 		ely to resu	lt in negli	gible num	bers pass	ing throug	jh East A	nglia ONE	E North du	ring migr	ation relat	tive to the		
 b) The predicted effect attributab assessment for these features 		-			I that it wo	ould not si	gnificantly	/ contribu	te to or alt	er the ov	erall in-co	mbination		
Site Features	Likely e	ffect(s) of	East Ang	lia ONE N	lorth									
	Underw	ater noise	Ves	ssel Intera	ections	Indirect of prey	effects on	С	hanges to quality		In-co	ombination		





Site	127														
Name of European Site:	Östliche	Deutsc	he Buc	ht SPA											
Distance to East Anglia ONE North (km)	411														
	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 ONE North 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 ONE North (km)	128 Ouess 675	ant-Mo	lene SA	vc											
Site Features	Likely	effect(s	of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indirec	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 ONE North and the extent of any impact on individuals from this site result are negligible and would result in no potential for LSE.





Site	129															
Name of European Site:	Outer	Thame	s Estuar	y SPA an	d pSPA e	xtension										
Distance to East Anglia ONE North (km)	Within	cable	able corridor ly effect(s) of East Anglia ONE North													
Site Features	Lik	cely effe	ect(s) of l	East Angli	a ONE No	orth										
	Co	ollision r	mortality		Displace	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-cor	nbination			
	С		0	D	С	0	D	С	0	D	С	0	D			
Nonbreeding red-throated divers			Y (a)		Y (b)	Y (c)	Y (b)	Y (b)	Y (a)	Y (b)	Y (a)	Y (a)	N (e)			
Breeding little tern and common ter	'n		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)			

- a) Given the overlap of the East Anglia ONE North 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 ONE North 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 ONE North 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 ONE North 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 ONE North 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	130												
Name of European Site:	Papa	Stour SPA											
Distance to East Anglia ONE North (km)	910												
Site Features	Like	ely effect(s	s) of Ea	ast Anglia	a ONE No	orth							
	Col	lision mort	ality		Displace	ement/Dist	urbance	Barrier E	Effect		Cumula	tive/In-cor	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 (c)	N (c)	N (c)
Breeding ringed plover		N (b))		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	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 ONE North 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 ONE North site.
- c) The predicted effect attributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Papa Stour SPA.





Site 131

Name of European Site: Papa Westray (North Hill and Holm) SPA

Distance to East Anglia ONE

North (km)

835

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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)
Breeding Arctic skua		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

a) Papa Westray SPA is beyond the maximum foraging range of Arctic tern or Arctic skua so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia ONE North site are likely to be extremely small relative to BDMPS.

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





Site Name of European Site: Distance to East Anglia ONE North (km)	132 Pater 846	Noster-	∙skärgå⊦	rden SA	С										
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water n	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
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	e potentia	Limpac	t range o	of East A	nglia Ol	VE North	and the	site is h	evond th	nat of pot	ential for	direct o	r indirect	effects.	





Site 133 Name of European Site: **Pentland Firth Islands SPA Distance to East Anglia ONE** 769 North (km) Likely effect(s) of East Anglia ONE North Site Features Collision mortality Displacement/Disturbance Cumulative/In-combination **Barrier Effect** D С 0 С 0 С 0 D С 0 D D N (a) N (a) Breeding Arctic tern 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 ONE North site is likely to be extremely small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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 1	134														
Name of European Site:	ortsmouth	rtsmouth Harbour SPA													
Distance to East Anglia ONE 2 North (km)	86 (windfa	6 (windfarm site) and 238 (offshore cable corridor)													
Site Features	Likely e	ffect(s) of	East Angli	a ONE No	orth										
	Collision	n mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulative/In-combination					
	С	0	D	С	0	D	С	0	D	С	0	D			
Nonbreeding brent goose, dunlin, black-tailed godwit, red-breasted merganser		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 Portsmouth Harbour SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.

b) The predicted effect attributable to East Anglia ONE North 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	135														
Name of European Site:	Presq	u'ile De	Crozor	SAC											
Distance to East Anglia ONE North (km)	704														
Site Features	Likely	effect(s)	of East	t Anglia	ONE No	rth									
	Underwater noise			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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 136

Name of European Site: Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA

Distance to East Anglia ONE

419

Site Features	Likely effect(s) of East Anglia ONE North														
	Collision	mortality		Displace	ement/Dis	turbance	Barrier I	Effect		Cumula	tive/In-cor	mbination			
	С	0	D	С	0	D	С	0	D	С	0	D			
Breeding seabirds including common 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 <i>Gelochelidon nilotica</i>		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (e)	N (e)	N (e)			
Nonbreeding seabirds including razorbill, black-throated diver, red-throated 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		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (e)	N (e)	N (e)			
Waterbirds including pintail, shoveler, teal, wigeon, mallard, garganey <i>Anas querquedula</i> , grey heron <i>Ardea cinerea</i> , turnstone, bittern, brent goose, barnacle goose, sanderling, dunlin, curlew sandpiper, ringed plover,		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (e)	N (e)	N (e)			





Site 136

Name of European Site: Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA

Distance to East Anglia ONE

North (km)

419

,															
Site Features	Likely effect(s) of East Anglia ONE North														
	Collision	mortality		Displace	ement/Dist	urbance	Barrier E	Effect		Cumulative/In-combination					
	С	0	D	С	0	D	С	0	D	С	0	D			
Kentish plover Charadrius 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 ONE North 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 ONE North 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 ONE North 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.





Site		1:	36												
Name	of European Site:	R	amsar-G	ebiet S-H	Wattenme	eer und ar	ngrenzen	de Küsteı	ngebiete	SPA					
Distan North															
Site Fe	Likely effect(s) of East Anglia ONE North Collision resetables. Disables and at /Disturbance. Description of East Anglia ONE North														
		Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combinat													
			С	0	D	С	0	D	С	0	D	С	0	D	
c)	Survey data show little or no this SPA are likely to result continental side of the North	in ne	gligible nu				-	_				-			
d)	Terrestrial birds from this SI the continental coast.	PA ar	re very un	ikely to m	igrate to th	ne UK; tho	se that do	migrate a	are more l	likely to fo	llow the w	est Europ	ean flyway	/ along	
e)	The predicted effect attribut assessment for these feature			•	North is s	o small th	at it would	l not signit	ficantly co	entribute to	or alter th	ne overall	in-combina	ation	

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





137														
Récifs	et mar	ais arri	ère-litto	raux du	Cap Lév	ri à la Po	ointe de	Saire S	AC					
385														
Likely	effect(s) of Eas	t Anglia	ONE No	rth									
Under	water n	oise	Vessel Interactions			Indirect effects on prey			Change quality	es to wa	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)
N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
	Récifs 385 Likely Under C N(a)	Récifs et mar 385 Likely effect(s Underwater no C O N(a) N(a)	Récifs et marais arri 385 Likely effect(s) of Eas Underwater noise C O D N(a) N(a) N(a)	Récifs et marais arrière-littor 385 Likely effect(s) of East Anglia de la Underwater noise Vessel C O D C N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du 385 Likely effect(s) of East Anglia ONE No Underwater noise Vessel Interact C O D C O N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions C O D C O D N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pous 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirector prey C O D C O D C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects prey C O D C O D C O N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire SA 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey C O D C O D C O D N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire SAC 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire SAC 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C O N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire SAC 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C O D N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire SAC 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire SAC 385 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D





Site 138

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

Distance to East Anglia ONE 153 (windfarm site) and 132 (offshore cable corridor)

North (km)

Marine Mammals

Si	te Features	Likely	effect(s) of Eas	t Anglia	ONE N	orth											
		Under	Underwater noise			Vessel Interactions						Changes to water quality			In-combination			
		С	0	D	С	0	D	С	0	D	С	C O D			C O D			
	rbour porpoise ocoena 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)		
1	ey seal <i>Halichoerus</i> rpus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)		
1	rbour seal <i>Phoca</i> ulina	N(a)	N(a)	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	Permanent loss			Tempo disturb	orary phy ance	ysical	Smothering due to increased suspended sediment			Re- mobilisation of contaminate d sediments			Undervand vik	water no oration	oise	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 (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 ONE North 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 138

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

Distance to East Anglia ONE 153 (windfarm site) and 132 (offshore cable corridor)

North (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 139

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

Distance to East Anglia ONE 136 (windfarm site) and 134 (offshore cable corridor)

North (km)

Marine Mammals

Site Features	Likely	effect(s) of Eas	t Anglia	ONE N	orth									
	Under	water n	oise	Vesse	I Interac	ctions	Indired prey	t effect	s on	Chang quality	jes to w	ater	In-com	nbinatior	า
	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	nent lo	SS	Tempo	orary phoance	ysical	increa	ering du sed nded se			obilisation ninate dents			water no	oise	In-com	binatior	า
	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 ONE North and the site is beyond that of potential for direct or indirect effects.

Information to Support AA – Screening Matrices



Site 139

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 140 **River Derwent SAC** Name of European Site: 274 (windfarm site) and 268 (offshore cable corridor) **Distance to East Anglia ONE** North (km) Likely effect(s) of East Anglia ONE North Site features Re- mobilisation Underwater noise Electromagnetic Smothering due to Permanent habitat Temporary In-combination physical increased of contaminated and vibration fields (EMF) loss suspended disturbance sediments sediment С С 0 С 0 С 0 С 0 D С 0 С 0 0 D D D D D D N (a) River lamprey 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 ONE North project. Sea lamprey could in theory be present in the vicinity of the proposed East Anglia ONE North 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 141

Name of European Site: Ronas Hill - North Roe and Tingon SPA

Distance to East Anglia ONE North 926

(km)

Site Features	Likely e	effect(s) o	f East An	glia ONE	North							
	Collisio	n mortali	ty	Displace	ement/Dis	turbance	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 ONE North 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 ONE North 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 ONE North 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 ONE North 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 142

Name of European Site: Rousay SPA

Distance to East Anglia ONE 818

North (km)

()												
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	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 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 ONE North site are small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Rousay SPA.





Site	143														
Name of European Site:	Sälöfj	orden S	SAC												
Distance to East Anglia ONE North (km)	850														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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	potentia	l impact	range o	of East A	nglia ON	NE North	and the	site is b	eyond th	nat of pot	ential for	direct o	r indirect	effects.	





Site Name of European Site: Distance to East Anglia ONE North (km)	144 Sanda 814	y SAC													
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	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 <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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.

Breeding woodlark Lullula

arborea





Y (a)

Site Name of European Site: Distance to East Anglia ONE North(km)	145 Sandlings Within ons		ole corri	dor					
Site Features	Likely effect		ıst Anglia	a ONE North Displacement/l	Disturbanc		In combina	ation	
	С	0	D	С	0	D	С	0	D
Breeding nightjar Caprimulgus europaeus	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)	Y (a)

Y (a)

a) Potential for direct and indirect effects (LSE) during all phases of development and therefore screened in.





146 Site SBZ 1 / ZPS 1 SPA Name of European Site: 121 **Distance to East Anglia ONE** North (km) Site Features Likely effect(s) of East Anglia ONE North Changes to water Underwater noise **Vessel Interactions** Indirect effects on In-combination quality prey С 0 D С 0 D 0 D 0 D С 0 D Harbour seal Phoca vitulina N(a) Grey seal Halichoerus grypus N(a) N(a)

a) The distance between the potential impact range of East Anglia ONE North 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 ONE North (km)	147 SBZ 2 110	/ ZPS 2	2 SPA												
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water n	oise	Vessel	Interact	ions	Indirec	t effects	on	Chang	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				-		III Nia atla					ما مرياد لا يالم	. f	!4		14 !

a) The distance between the potential impact range of East Anglia ONE North 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 ONE North (km)	148 SBZ 3 111	/ ZPS 3	SPA												
Site Features		effect(s)		t Anglia Vessel	ONE No		Indired	ct 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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





Site 149 Name of European Site: **Scanner Pockmark SAC**

Distance to East Anglia ONE

657

North (km)																		
Site	Likely e	effect(s)	of East /	Anglia Ol	NE Norti	h												
Features	Perma	inent los	SS	Tempo disturb	orary ph pance	ysical	Smoth increated suspensedim	nded	ue to		obilisatio minated ents			water naibration	oise	In-con	nbinatio	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 150

Name of European Site: Seevogelschutzgebiet Helgoland SPA

Distance to East Anglia ONE

North (km)

405

Site Features	Likely ef	fect(s) of E	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat	ive/In-com	bination
	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 ONE North site despite this site being within theoretical maximum foraging range of gannet. East Anglia ONE North is beyond the maximum foraging range of other seabird species at Seevogelschutzgebeit Helgoland SPA. Proportions of these populations migrating through East Anglia ONE North 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 ONE North 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.

Information to Support AA – Screening Matrices



Site 150

c) The predicted effect attributable to East Anglia ONE North 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	151														
Name of European Site:	Skage	ns Gre	n og Sk	agerrak	SAC										
Distance to East Anglia ONE North (km)	754														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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
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 Ol	NE North	and the	site is b	eyond th	nat of pot	ential for	direct o	r indirect	effects.	





Site 152

Name of European Site: Solent & Southampton Water SPA & Ramsar (cable corridor)

Distance to East Anglia ONE

North (km)

294

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	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
Nonbreeding teal, brent goose, ringed plover, black-tailed godwit		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding Mediterranean gull		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, roseate tern, Sandwich 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 Solent & Southampton Water SPA and Ramsar features occurring in the East Anglia ONE North site, and migrations of birds from this site are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) No Mediterranean gulls were recorded in the East Anglia ONE North site during bird surveys. This species is scarce in England, although increasing. Birds from the SPA are unlikely to migrate through the East Anglia ONE North 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 ONE North 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 ONE North 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 ONE North 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	153														
Name of European Site:	Sotesi	kär SA0	;												
Distance to East Anglia ONE North (km)	863														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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)	N(a)
a) The distance between the	potentia	l impact	range o	of East A	nglia ON	NE North	and the	extent o	f any eff	ect on in	dividuals	from th	is site wo	ould resu	ılt in no

Site Name of European Site: Distance to East Anglia ONE North (km)			rth Sea dor and	SAC d windfa	rm site)											
Site Features		Likely effect(s) of East Anglia ONE North Underwater noise														
	С	0	D	С	0	D	Ć	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 155

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

Distance to East Anglia ONE

481

North (km)

Site Features	Likely eff	fect(s) of I	East Anglia	a ONE No	orth							
	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
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 ONE North site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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 Name of European Site: Distance to East Anglia ONE North (km)	156 Staverton Park a 6 (onshore cable	nd the Thicks Wantisden SAC corridor)		
Site Features	Likely effect(s) of Habitat Loss C	East Anglia ONE North O	D	
Old acidophilous oak woods with <i>Euercus robur</i> on sandy plains	N(a)	N(a)	N(a)	

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site	157														
Name of European Site:	Steing	grund S	AC												
Distance to East Anglia ONE North (km)	411														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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 <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)





158														
Store I	Rev SC	ı												
720														
Likely 6	effect(s)	of Eas	t Anglia (ONE No	th									
Underv	vater no	oise	Vessel	Interacti	ons	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
N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
	Store I 720 Likely o Underv	Store Rev SC 720 Likely effect(s) Underwater no	Store Rev SCI 720 Likely effect(s) of Eas Underwater noise C O D	Store Rev SCI 720 Likely effect(s) of East Anglia C Underwater noise Vessel C O D C	Store Rev SCI 720 Likely effect(s) of East Anglia ONE Nor Underwater noise Vessel Interacti C O D C O	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C	Store Rev SCI 720 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey Quality In-combination quality C O D C O D C O D C O





Site 159

Name of European Site: Stour & Orwell Estuaries SPA and Ramsar

Distance to East Anglia ONE 35 (windfarm site) and 87 (offshore cable corridor)

North (km)

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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 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 (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding avocet		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 Stour & Orwell Estuaries SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) Survey data show no evidence of Stour & Orwell Estuaries SPA feature avocet occurring in the East Anglia ONE North OWF sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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.

East Anglia ONE North Offshore Windfarm Information to Support AA – Screening Matrices





Site	160														
Name of European Site:	Strand	denge p	å Læsø	og hav	et syd h	erfor SA	C								
Distance to East Anglia ONE North (km)	850														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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	potentia	l impac	t range	of East A	nglia Ol	NE North	and the	site is b	eyond th	nat of pot	ential for	direct o	r indirect	effects.	





Site 161

Name of European Site: Sumburgh Head SPA

Distance to East Anglia ONE

855

North (km)

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	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 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 ONE North site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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 162

Name of European Site: Sydlige Nordsø SAC

Distance to East Anglia ONE 431

North (km)

Site Features	Likely	effect(s) of Eas	t Anglia (
	Under	water n	oise	Vessel	Interacti	ions	Indirec	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	C	0	D	C	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 ONE North and the site is beyond that of potential for direct or indirect effects.





Site				163															
Name of I	European Site:			Sylt	er Au	ßenriff S0	CI												
Distance	to East Anglia ONE I	North ((km)	478	(wind	lfarm site) and 49	7 (offsh	ore	cable	corr	idor)							
Ornitholo	рду																		
Site Featu	ıres		Likely	effec	ct(s) o	f East Ang	glia ONE	North											
			Collis	ion m	ortalit	:y	Displa	cement/D	Distu	rbanc	е	Barrier E	ffect			Cumu	lative/I	n-comb	ination
			С	0		D	С	0		D		С	0		D	С	0		D
including throated do black-backed gukittiwake,	ing seabird assemblag black-throated diver, ro liver, common gull, les ked gull, great black- ull, little gull, gannet, common tern, Arctic to tern, guillemot	ed- sser		N (a	a)		N (a)	N (a)		N (a)		N (a)	N (a	a)	N (a)	N (b)	N (b)	N (b)
Marine m																			
Site Featu	ıres	Like	ely effe	ct(s) c	of Eas	t Anglia O	NE Nor	h											
		Und	derwate	er nois	se	Vessel	Interacti	ons	Inc	direct e	effect	ts on pre		hang uality	ges to wate	er	In-co	mbinatio	on
		С	0	[)	С	0	D	С		0	D	C		0	D	С	0	D
Harbour p	orpoise <i>Phocoena</i>	N (d	c) N (c)		V (с)	N (c)	N (c)	N (c)	N ((c)	N (c)	N (c)	N	l (c)		N (c)	N (c)	N (c)	N (c)
	Halichoerus grypus	N (d		1	V (c)	N (c)	N (c)	N (c)	N ((c)	N (c)	N (c)	N	l (c)		N (c)	N (c)	N (c)	N (c)
Harbour s	eal <i>Phoca vitulina</i>	N (d	c) N (c)		V (с)	N (c)	N (c)	N (c)	N ((c)	N (c)	N (c)	N	l (c)		N (c)	N (c)	N (c)	N (c)
Fish																			
Site	Likely effect(s) of Ea	st Angl	ia ONE	Nort	h														
Features	Permanent habitat loss	Temp physic distur	cal		inc	nothering or creased spended diment	due to	Re- mol contami sedimer	nate		-	Inderwate nd vibrat		se	Electrom fields (EN	U	lr	n-combi	nation





Site						163															
Name of European Site:					Sylter Außenriff SCI																
	Distance to East Anglia ONE North (km)					478 (478 (windfarm site) and 497 (offshore cable corridor)														
	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 ONE North 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 ONE North 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 ONE North 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	164														
Name of European Site:	Teesmout	eesmouth and Cleveland Coast SPA and Ramsar													
Distance to East Anglia ONE North (km)	331 (windf	(windfarm site) and 322 (offshore cable corridor)													
Site Features Likely effect(s) of East Anglia ONE North															
	Collisi	Collision mortality			Displacement/Disturbance			Effect		Cumulative/In-combination					
	С	0	D	С	0	D	С	0	D	С	0	D			
Nonbreeding knot, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)			
Nonbreeding Sandwich tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (d)	N (d)	N (d)			
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 Teesmouth & Cleveland Coast SPA features knot or redshank occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North. However, very few terns of any species were seen in the East Anglia ONE North 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 ONE North 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 ONE North. 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 ONE North site.
- d) The predicted effect attributable to East Anglia ONE North 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.





Site	165												
Name of European Site:	Thames Estuary and Marshes SPA and Ramsar												
Distance to East Anglia ONE North (km)	9 (windfarm site)												
Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth								
	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 dunlin, knot, ringed plover, black-tailed godwit, grey plover, avocet, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)	
Nonbreeding hen harrier		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 Thames Estuary & Marshes SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) Survey data show no evidence of hen harrier occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 1	66													
Name of European Site:	Thanet Coast and Sandwich Bay SPA and Ramsar													
Distance to East Anglia ONE 1 North (km)														
Site Features Likely effect(s) of East Anglia ONE North														
	Collisio	Collision mortality			Displacement/Disturbance			Effect		Cumulative/In-combination				
	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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North site.
- c) The predicted effect attributable to East Anglia ONE North 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 167 Name of European Site: **Thanet Coast SAC Distance to East Anglia ONE** 89 (offshore cable corridor) North (km) Likely effect(s) of East Anglia ONE North Site Features Permanent loss Temporary physical Smothering due to Re-mobilisation of Underwater noise In-combination disturbance and vibration increased contaminated suspended sediments sediment 0 0 С 0 С 0 С 0 D С D С 0 D С D D D N (a) Sandbanks which are slightly covered by sea water all the time N (a) Mudflats and sandflats not covered by seawater at low tide N (a) N (a)

Reefs

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





Site	168	168													
Name of European Site:	The S	he Swale SPA & Ramsar													
Distance to East Anglia ONE North (km)	140 (\	0 (windfarm site) and 98 (offshore cable corridor)													
Site Features	Likely effect(s) of East Anglia ONE North														
	Collision mortality		Displacement/Disturbance			Barrier E		Cumulative/In-combination							
	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 ONE North site, and migrations of birds from this site are likely to result in negligible numbers passing through the East Anglia ONE North site.

b) The predicted effect attributable to East Anglia ONE North 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 169 The Wash and North Norfolk Coast SAC Name of European Site: 105 (windfarm site) and 97 (cable corridor) **Distance to East Anglia ONE North** (km) **Marine Mammals** Site Features Likely effect(s) of East Anglia ONE North Indirect effects on prey Changes to water quality In-combination Underwater noise Vessel Interactions/ disturbance at seal haul out sites С С С 0 С 0 С D D 0 D 0 0 Y (a) Y (a) Y (a) Harbour seal Y (a) Phoca vitulina Y (a) Y (a) Y (a) Y (a) Y (a) Grey seal Y (a) Halichoerus grypus **Benthic Habitats** Smothering due to Re- mobilisation of Site Features Permanent loss Temporary physical Underwater In-combination increased suspended disturbance contaminated noise and sediment sediments vibration D С 0 С С С 0 С D С 0 D 0 D 0 D 0 D Sandbanks which N (b) N (b) Ν N (b) Ν N (b) N (b) N (b) N (b) Ν 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 Ν N (b) Ν Ν 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) N (b) N (b) Ν N (b) N (b) Ν Ν N (b) N (b) Ν Ν Ν Ν Ν Ν inlets and bays (b) (b) (b) (b) (b) (b) (b) (b) (b)

Information to Support AA – Screening Matrices



Site 169

Name of European Site: The Wash and North Norfolk Coast SAC

Distance to East Anglia ONE North 105 (windfarm site) and 97 (cable corridor)

(km)

- 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 ONE North. Assumed that all harbour seal in the East Anglia ONE North 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 ONE North and the designated site is beyond the range of any potential LSE





Site 170

Name of European Site: The Wash SPA and Ramsar

Distance to East Anglia ONE

192 (windfarm site) and 104 (offshore cable corridor)

North (km)

Site Features	Likely effect(s) of East Anglia ONE North													
	Collision	Collision mortality			ement/Dist	urbance	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 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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North 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 ONE North (km)	171 Trego 556	r Goëlo	SAC													
Site Features		effect(s water no		t Anglia (Vessel	ONE No Interact		Indirec	t effects	on	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)	

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





172 Site Name of European Site: Troup, Pennan and Lion's Heads SPA **Distance to East Anglia ONE** 650 North (km) Site Features Likely effect(s) of East Anglia ONE North Displacement/Disturbance Collision mortality **Barrier Effect** Cumulative/In-combination D С 0 0 D 0 С 0 D С D Breeding seabird assemblage including N (a) N (b) N (b) N (b) as named features razorbill, fulmar, guillemot, kittiwake, herring gull

- 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 ONE North site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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	173														
Name of European Site:	Untere	ems un	d Auße	nems S0	CI .										
Distance to East Anglia ONE North (km)	320														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water n	oise	Vessel	Interact	ions	Indired	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 potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.





174														
Vadeh	navet m	ed Ribe	Å, Tvec	l Å og V	arde Å v	est for	Varde S	AC						
477														
Likely	effect(s) of Eas	t Anglia	ONE No	rth									
Under	water n	oise	Vessel	Interact	ions	Indired prey	t effects	on	1		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)
N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
	Vader 477 Likely Under C N(a) N(a)	Vadehavet m 477 Likely effect(s Underwater ne C O N(a) N(a) N(a) N(a)	Vadehavet med Riber 477 Likely effect(s) of East Underwater noise C O D D N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tvec 477 Likely effect(s) of East Anglia of Underwater noise Vessel C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og V 477 Likely effect(s) of East Anglia ONE No Underwater noise Vessel Interact C O D C O N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å v 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions C O D C O D N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirector prey C O D C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SA 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects prey C O D C O D C O N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey C O D C O D C O D N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC 477 Likely effect(s) of East Anglia ONE North Underwater noise	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality C O D C O D C O D N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC 477 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirect effects on prey quality C O D C O D C O D C O D C O N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a)





Site	175														
Name of European Site:	Venø,	Venø S	und SA	/C											
Distance to East Anglia ONE North (km)	633														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	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	e potentia	l impac	range o	of East A	nglia Ol	NE North	and the	site is b	eyond th	nat of pot	ential fo	r direct o	r indirect	effects.	





Site 176 Name of European Site: Vlaamse Banken SAC **Distance to East Anglia ONE** 86 (windfarm site) and 89 (offshore cable corridor) North (km) **Marine Mammals** Likely effect(s) of East Anglia ONE North Site Features Indirect effects on prey In-combination Vessel Interactions and Changes to water quality Underwater noise disturbance at seal haul outs С 0 С С 0 С С 0 D D 0 D D 0 D Harbour porpoise Ν Ν Ν N (a) N (a) Ν N (a) N (a) N (a) Ν N (a) N (a) Ν N (a) Phocoena (a) (a) (a) (a) (a) (a) phocoena N (a) Grey seal Υ Υ Υ N (a) N (a) Ν N (a) N (a) Ν N (a) N (a) N (a) Ν Halichoerus grypus (d) (d) (a) (a) (a) (d) Harbour seal *Phoca* Ν Ν Ν N (a) N (a) Ν N (a) N (a) N (a) Ν N (a) N (a) Ν N (a) (a) (a) (a) vitulina (a) (a) (a) Fish Site Likely effect(s) of East Anglia ONE North Feature Smothering due to Re- mobilisation Underwater noise Electromagnetic **Temporary** Permanent habitat In-combination physical fields (EMF) loss increased of contaminated and vibration suspended disturbance sediments sediment С 0 С 0 D С 0 D С 0 D 0 D С D С 0 D С 0 D





Site					176																			
Name of I	Europea	n Site			Vlaam	se Banl	ken S	AC																
Sea Lamprey	N(b)	N(b)	N(b	N(b) N(I) N(b	N(b)	N	l(b)	N(b)	N(b)	N(b)	N(b)	N(b))	(b	N(b)	N(b)	N(b)	N(b)	N(k	o N(b N	l(b)
Twaite Shad	N(b)	N(b)	N(b	N(t) N(I) N(b	N(b)	N	l(b)	N(b)	N(b)	N(b)	N(b)	N(b))	(b	N(b)	N(b)	N(b)	N(b	N(k	o N(b N	l(b)
Benthic h	Benthic habitats Site Features Permanent loss Temporary Smothering due to Re- mobilisation of Underwater noise In-																							
Site Featu	ite Features Permanent loss							iporai sical urband		incr		ing due d suspe t		con	mobil tamina iments	ate d			derwat vibra	er noise tion)	In- comb	oinatio	on
				С	0	D	С	0	D	С	C)	D	С	0	D		С	0	D		С	0	D
Reefs						N(c)	N(c)	N(c)	N(c)	N(c)	N	l(c)	N(c)	N(c)	N(c)	N(c	;)	N(c)	N(c)	N(c)		N(c)	N(c)	N(c)
Sandbank slightly co water all t	overed by		١	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N	l(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 ONE North 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 ONE North 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.
- d) The East Anglia ONE North 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 177

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

Distance to East Anglia ONE 108 (windfarm site) and 117 (offshore cable corridor)

North (km)

Ma	rine	Ma	mm	als

Site Features	Likely e	effect(s) o	f East An	glia ONE	North										
	Underw	vater nois	е	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	N (a)	N (a)	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 Ea	ast Ang	lia ONE	North															
Features	Perm loss	anent h	nabitat	Temp physic disturb	cal		Smoth increa suspe sedim	ended	due to		nobilisa ntamina nents			rwater 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)
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)





Sit	te					177																
Na	ime of	Europe	an Site) :		Vlakt	e van c	de Raaı	n SCI/S	AC												
		to Eas	t Angli	a ONE		108 (windfa	rm site) and 1	17 (off	shore o	able c	orridor)								
No	orth (kn	n)																				
	vaite	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sn	ad	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)

a) The distance between the potential impact range of East Anglia ONE North 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 ONE North 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 178 Name of European Site Voordelta SAC and SPA **Distance to East Anglia ONE** 93 (windfarm site) and 107 (offshore cable corridor) North (km) Ornithology Site Features Likely effect(s) of East Anglia ONE North Displacement/Disturbance Collision mortality **Barrier Effect** Cumulative/Incombination С С С 0 0 С 0 D D D 0 D N (a) N (b) Wintering and passage waterbirds including N (a) N (a) N (a) N (a) N (a) N(a) N (b) Ν cormorant, shelduck, ringed plover, dunlin, (b) goldeneye, sanderling, little gull, eider, great crested grebe, greylag goose, Sandwich tern, avocet, gadwall, Slavonian grebe, spoonbill, redbreasted merganser, pintail, red-throated diver, bar-tailed godwit, oystercatcher, shoveler, wigeon, turnstone, scaup, redshank, common tern, teal, curlew, grey plover, common scoter **Marine Mammals** Likely effect(s) of East Anglia ONE North Site Features Indirect effects on prev Underwater noise **Vessel Interactions** Changes to water In-combination quality С С С 0 С 0 D 0 0 D D 0 D N (c) Ν Harbour porpoise Phocoena phocoena (c) Grev seal Y (d) Y (d) Y (d) N (c) Ν Halichoerus grypus (c) Harbour seal Phoca N (c) Ν N (c) vitulina (c) Fish





Site				17	'8																
Name of	Europe	an Site		Vo	ordelt	a SAC	and SP	Α													
Distance North (kn		Anglia	ONE	93	(wind	farm si	ite) and	d 107 (d	offsho	re cable	e corric	lor)									
Site	Likely	effect(s)	of East	Anglia C	ONE No	rth															
Features	Perma loss	anent ha	bitat	Tempo physic disturb	al		to inc	hering creased ended nent		_	nobilisat minated ents			water ibration			romagn (EMF)		In-co	mbinati	ion
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sea lamprey	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)
River lamprey	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)
Allis shad	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)
Twaite shad	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)	N(e)
Benthic F	labitats	;	·	·	'	'	'	'	'	·	'	·	_	'	'	'	'	'	'	'	
Site Features	Likely	effect(s)	of East	Anglia C	ONE No	rth															
realures	Likely effect(s) of East Anglia ONE North Permanent loss						physi	oorary cal bance		Smoth increa suspe sedim	ended	lue to		obilisat minate ents			rwater ibratior		In-co	mbinati	ion
				С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D





Site	17	8																
Name of European Site																		
Distance to East Anglia ONE North (km)	93	(wind	farm si	ite) and	d 107 (d	offsho	re cable	e corric	dor)									
Sandbanks which are slightly covered by sea water all the time	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)	N(f)

- a) Survey data show little or no evidence of Voordelta SPA features occurring in the East Anglia ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site.
- b) The predicted effect attributable to East Anglia ONE North 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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.
- d) The East Anglia ONE North windfarm site is within the foraging range of grey seal and therefore the potential for LSE from underwater noise impacts cannot be ruled out
- e) It was agreed as part of the East Anglia ONE North 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
- f) 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	179														
Name of European Site:	Vrång	öskärg	ården S	AC											
Distance to East Anglia ONE North (km)	863														
Site Features	Likely	effect(s	of Eas	t Anglia	ONE No	rth									
	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	potentia	l impact	range o	of East A	nglia Ol	NE North	and the	site is b	eyond th	at of pot	ential for	direct o	r indirect	effects.	





Site 180

Name of European Site: Waddenzee (Wadden Sea) SPA

Distance to East Anglia ONE 157

North (km)												
Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	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 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 180

Name of European Site: Waddenzee (Wadden Sea) SPA

Distance to East Anglia ONE North (km)

greenshank, redshank, lapwing

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





Site 181

Name of European Site: Waddenzee SAC

Name of European S	ite:		waddenze															
Distance to East Ang North (km)	lia ONE	≣ ′	157 (wind1	arm sit	e) and [^]	176 (off	shore (cable c	orridor	·))								
Marine Mammals																		
Site Features	Likely	effect(s) of East A	nglia O	NE Nort	:h												
	Underwater noise			Vesse	Vessel Interactions			Indirect effects on prey			Changes to water quality			nbinatic	n			
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D			
Harbour porpoise <i>Phocoena phocoena</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 <i>Halichoerus</i> <i>grypu</i> s	N(a)	N(a)	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	Permanent loss			Temporary physical disturbance			Smothering due to increased suspended sediment			Re- mobilisation of contaminate d 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 (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 181

- a) The distance between the potential impact range of East Anglia ONE North 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 182

Name of European Site: West Westray SPA

Distance to East Anglia ONE 829

North (km)															
Site Features	Likely effect(s) of East Anglia ONE North														
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	Effect		Cumulative/In-combination					
	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 ONE North site are likely to be very small relative to BDMPS.
- b) The predicted effect attributable to East Anglia ONE North 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 183

Name of European Westerschelde & Saeftinghe SAC

Site:

Distance to East 108 (windfarm site) and 120 (offshore cable corridor)

Anglia ONE North

(km)

Site Features	Likely	effect(s) of Ea	ast Ang	lia ONE	North															
	Permanent habitat loss			Temporary physical disturbance			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) It was agreed as part of the East Anglia ONE North 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	184														
Name of European Site:	Winte	rton – I	lorsey l	Dunes S	AC										
Distance to East Anglia ONE 60 (cable corridor) North (km)															
Site Features	Likely effect(s) of East Anglia ONE North														
	Underwater noise			Vessel Interactions			Indired	t effects	on	Change	es to wa	ter	In-combination		
								prey							
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N	N (a)	N (a)	N (a)	N (a)	N (a)	N	N (a)	N (a)	N		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 ONE North windfarm site due to the distance between the site and the closest point onshore (36km). There is also no potential for any direct disturbance as a result of activities within the East Anglia ONE North 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	185														
Name of European Site:	Yell Sound Coast SAC														
Distance to East Anglia ONE 911 (windfarm site) North (km)															
Site Features	Likely effect(s) of East Anglia ONE North														
	Underv	vater no	oise	Vessel	Interact	ions	Indired	t effects	on	Chang	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 ONE North and the extent of any effect on individuals from this site would result in no potential for LSE.

Wintering and passage waterbird

assemblage including as named features lapwing, eider, pink-footed

Breeding little tern, common tern,

goose, redshank

Sandwich tern

Site



186

N (a)

N (b)



Name of European Site: Ythan Estuary, Sands of Forvie and Meikle Loch SPA **Distance to East Anglia ONE** 611 North (km) Likely effect(s) of East Anglia ONE North Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 D С 0 С С 0 D 0 D D

N (a)

N (b)

N (c)

N (b)

N (c)

N (b)

N (c)

N (b)

N (a)

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 ONE North site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North 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 ONE North 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 ONE North 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.