

Habitat Regulations Assessment

Appendix 2 – Information to Support AA Report - Screening Matrices – (Clean)

Applicant: East Anglia ONE North Limited

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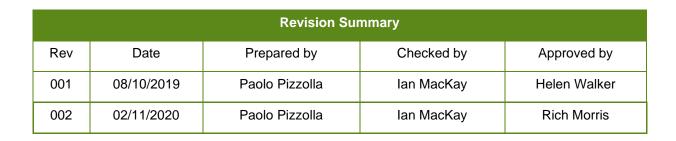
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Applicable to **East Anglia ONE North**







Description of Revisions					
Rev	Page	Section	Description		
01	n/a	n/a	Final for Submission		
002	n/a	n/a	Final for Submission following ExA Qs 1.2.2		







Glossary of Acronyms

AA	Appropriate Assessment
APP	Application Document
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
HRA	Habitats Regulations Assessment
LSE	Likely Significant Effect
SAC	Special Area of Conservation
SCI	Site of Community Importance
SPA	Special Protection Area

East Anglia ONE North Offshore Windfarm 5.3.2 Information to Support AA – Screening Matrices





Glossary of Terminology

Applicant	East Anglia ONE North Limited.
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.
Natura 2000 site	A site forming part of the network of sites made up of Special Areas of Conservation and Special Protection Areas designated respectively under the Habitats Directive and Birds Directive.
Offshore cable corridor	This is the area which will contain the offshore export cables between offshore electrical platforms and landfall.
Offshore development area	The East Anglia TWO windfarm site and offshore cable corridor (up to Mean High Water Springs).
Offshore 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.

East Anglia ONE North Offshore Windfarm 5.3.2 Information to Support AA – Screening Matrices





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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. For Deadline 1 this document has been revised to address the following:
 - A request from the Examining Authority to include the following sites that were missing from the Screening Matrices submitted with the application (Examining Authority's First Written Questions, Question 1.2.2):
 - Minsmere to Walberswick Heaths and Marshes SAC
 - Plymouth Sound and Estuaries SAC
 - Severn Estuary SAC 0
 - River Avon SAC
 - Havet Omkring Nordre Ronner (SAC or SPA not stated)
 - Knudegrund SAC
 - LØnstrup RØdgrund SAC
 - Sandbanker ud for Thorsminde SAC
 - Sandbanker ud for Thyboron SAC
 - Thyboron Stenvolde SCI
 - Littoral Cauchois SAC
 - Panache De La Gironde Et Plateau Rocheux De Cordouan (Système Pertuis Gironde) SAC
 - Pertuis Charentais SAC
 - Mühlenberger Loch SPA
 - SchleswigHolsteinisches Elbastuar und angrenzende Flachen SAC
 - Unterelbe SCI 0
 - A request from the Examining Authority to provide a revised version of the matrices with footnotes updated to include document and paragraph number references to the application materials where the evidence can be found (Question 1.2.4).

5.3.2 Information to Support AA – Screening Matrices





2 Screening Matrices

2.1 Effects Considered

3. 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 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)







Site Type	Feature(s)	Potential Effects
		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

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

Table 2.2 Sites included in Screening

East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
1	Abberton Reservoir SPA & Ramsar	✓				
2	Abers - Côtes des légendes SAC		✓			
3	Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø SAC		✓			
4	Ålborg Bugt, Randers Fjord Og Mariager Fjord SAC		√			







East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
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	✓				
20	Berwickshire and North Northumberland Coast SAC		✓	√		







East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
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	✓	√			
39	Cromarty Firth SPA & Ramsar	✓				







East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
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		✓		√	
55	Exe Estuary SPA & Ramsar	1				







East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
56	Fair Isle SPA	✓				
57	Falaise du Bessin Occidental SPA	1				
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 SAC		✓			
64	Firth of Tay & Eden Estuary SPA & Ramsar	✓				
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	✓				
73	Great Yarmouth North Denes SPA	✓				







East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
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	Havet Omkring Nordre Ronner (SAC or SPA - not stated)		✓			
81	Helgoland mit Helgoländer Felssockel SAC		✓			
82	Hermaness, Saxa Vord and Valla Field SPA	✓				
83	Hesselø med omliggende stenrev SAC		✓			
84	Hirsholmene, havet vest herfor og Ellinge Å's udløb SAC		√			
85	Hornsea Mere SPA	✓				
86	Hoy SPA	✓				
87	Humber Estuary SAC		✓	✓	✓	
88	Humber Estuary SPA & Ramsar	✓				
89	Hund und Paapsand SCI		✓			
90	Imperial Dock Lock, Leith SPA	✓				







East ONE North Reference	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Number						
91	Inner Dowsing, Race Bank and North Ridge SCI			✓		
92	Inner Moray Firth SPA & Ramsar	✓				
93	Isle of May SAC		√			
94	Klaverbank SAC		√			
95	Knudegrund SAC		√			
96	Kosterfjorden- Väderöfjorden SAC		✓			
97	Kungsbackafjorden SAC		√			
98	Küsten- und Dünenlandschaften Amrums SAC		✓			
99	Lindisfarne SPA & Ramsar	✓				
100	Littoral Cauchois SAC			✓		
101	Littoral Seino-Marin SPA	✓				
102	Loch of Strathbeg SPA & Ramsar	✓				
103	Løgstør Bredning, Vejlerne og Bulbjerg SAC		√			
104	LØnstrup RØdgrund SAC		√			
105	Lovns Bredning, Hjarbæk Fjord og Skals, Simested og Nørre Ådal, Skravad Bæk SAC		√			
106	Malmöfjord SAC		✓			







East ONE North Reference	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Number	,					
107	Marais du Cotentin et du Bessin - Baie des Veys SAC		✓			
108	Margate and Long Sands SCI			✓		
109	Marwick Head SPA	✓				
110	Måseskär SAC		√			
111	Medway Estuary and Marshes SPA & Ramsar	✓				
112	Minsmere to Walberswick Heaths and Marshes SAC			✓	✓	
113	Minsmere-Walberswick SPA & Ramsar	✓				
114	Montrose Basin SPA & Ramsar	✓				
115	Moray and Nairn Coast SPA & Ramsar	✓				
116	Mousa SAC		✓			
117	Mousa SPA	✓				
118	Mühlenberger Loch SPA		√	✓	✓	
119	Nationalpark Niedersächsisches Wattenmeer SAC		✓			
120	Nibe Bredning, Halkær Ådal og Sønderup Ådal SAC		√			
121	Nidingen SAC		✓			
122	Noordzeekustzone SAC		✓	✓	✓	
123	Nordre älvs estuarium SAC		✓			







East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
124	Nordvästra Skånes havsområde SAC		✓			
125	North Caithness Cliffs SPA	✓				
126	North Norfolk Coast SPA & Ramsar	✓				
127	North Norfolk Sandbanks and Saturn Reef SAC			✓		
128	Northumbria Coast SPA & Ramsar	✓				
129	Noss SPA	✓				
130	NTP S-H Wattenmeer und angrenzende Küstengebiete SAC		√			
131	Oosterschelde SAC		✓			
132	Orfordness - Shingle Street SAC			✓		
133	Östliche Deutsche Bucht SPA	✓				
134	Ouessant-Molène SAC		✓			
135	Outer Thames Estuary SPA	✓				
136	Panache De La Gironde Et Plateau Rocheux De Cordouan (Système Pertuis Gironde) SAC		✓	√	√	
137	Papa Stour SPA	✓				
138	Papa Westray (North Hill and Holm) SPA	✓				
139	Pater Noster-skärgården SAC		✓			







East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
140	Pentland Firth Islands SPA	✓				
141	Pertuis Charentais SAC		✓	✓	✓	
142	Plymouth Sound and Estuaries SAC			✓	√	
143	Portsmouth Harbour SPA & Ramsar	✓				
144	Presqu'ile de Crozon SAC		✓			
145	Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA					
146	Récifs et marais arrière- littoraux du Cap Lévi à la Pointe de Saire SAC		√			
147	Récifs Gris-Nez Blanc- Nez SAC		✓	✓		
148	Ridens et dunes hydrauliques du détroit du Pas-de-Calais SAC		✓	✓		
149	River Avon SAC				✓	
150	River Derwent SAC				✓	
151	Ronas Hill - North Roe and Tingon SPA	✓				
152	Rousay SPA	✓				
153	Sälöfjorden SAC		✓			
154	Sanday SAC		✓			
155	Sandbanker ud for Thorsminde SAC		✓			
156	Sandbanker ud for Thyboron SAC		✓			







East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
157	Sandlings SPA	✓				✓
158	SBZ 1 / ZPS 1 SAC		✓			
159	SBZ 2 / ZPS 2 SAC	✓				
160	SBZ 3 / ZPS 3 SAC	✓				
161	Scanner Pockmark SAC			√		
162	SchleswigHolsteinisches Elbastuar und angrenzende Flachen SAC		√	✓	✓	
163	Seevogelschutzgebiet Helgoland SPA	✓				
164	Severn Estuary SAC			✓	✓	
165	Skagens Gren og Skagerrak SAC		✓			
166	Solent and Southampton Water SPA & Ramsar	✓				
167	Soteskär SAC		✓			
168	Southern North Sea SAC		✓			
169	St Abb`s Head to Fast Castle SPA	✓				
170	Staverton Park and the Thicks Wantisden SAC					✓
171	Steingrund SAC		√			
172	Store Rev SCI		✓			
173	Stour and Orwell Estuaries SPA & Ramsar	√				
174	Strandenge på Læsø og havet syd herfor SAC		✓			
175	Sumburgh Head SPA	✓				







East ONE North	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
Reference Number						
176	Sydlige Nordsø SAC		✓			
177	Sylter Außenriff SCI	✓	√			
178	Teesmouth and Cleveland Coast SPA & Ramsar	√				
179	Thames Estuary and Marshes SPA & Ramsar	✓				
180	Thanet Coast and Sandwich Bay SPA & Ramsar	√				
181	Thanet Coast SAC			✓		
182	The Swale SPA & Ramsar	✓				
183	The Wash and North Norfolk Coast SAC		✓	✓		
184	The Wash SPA & Ramsar	✓				
185	Thyboron Stenvolde SCI		✓			
186	Tregor Goëlo SAC		✓			
187	Troup, Pennan and Lion`s Heads SPA	✓				
188	Unterelbe SCI				✓	
189	Unterems und Außenems SCI		✓			
190	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC		✓			
191	Venø, Venø Sund SAC		✓			
192	Vlaamse Banken SAC		✓	✓	✓	
193	Vlakte van de Raan SCI/SAC		✓		✓	







East ONE North Reference Number	Designated site	Ornithology	Marine Mammals	Benthic Habitats	Fish	Terrestrial
194	Voordelta SAC and SPA	✓	✓	✓	✓	
195	Vrångöskärgården SAC		✓			
196	Waddenzee SAC		✓	✓		
197	Waddenzee SPA	✓				
198	West Westray SPA	✓				
199	Westerschelde & Saeftinghe SAC		✓		√	
200	Winterton – Horsey Dunes SAC		✓			
201	Yell Sound Coast SAC		✓			
202	Ythan Estuary, Sands of Forvie and Meikle Loch SPA	✓				

2.3 Assessment of potential effects

- 6. 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.
- 7. 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
- 8. Where effects are not applicable to a particular feature they are greyed out.

5.3.2 Information to Support AA – Screening Matrices



Site 1

Name of European Site: Abberton Reservoir SPA and Ramsar

Distance to East Anglia ONE North 113 (windfarm site)

(km)

(KIII)													
Site Features	Likely eff	fect(s) of E	East Anglia	a ONE No	rth								
	Collision	mortality		Displace	ment/Dist	urbance	Barrier E	ffect		Cumulative/In-combination			
	С	0	D	С	0	D	С	0	D	С	0	D	
Wintering and passage waterbird assemblage including as named features 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species were recorded in the East Anglia ONE North windfarm site). Also see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. Survey data show no evidence of cormorant occurring in the East Anglia ONE North windfarm site (see section 5.1 of Appendix 12.2 (APP-470).







Site

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

Site	2															
Name of European Site:	Abers -	Côtes I	Des Leç	gendes	SAC											
Distance to East Anglia ONE North (km)	645 (win	dfarm	site)													
Site Features	Likely eff	kely effect(s) of East Anglia ONE North														
	Underw	ater no	se	Vesse	el Interac	ctions	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	
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 (see paragraph 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).







Site	3															
Name of European Site:	Agger T	Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø SAC														
Distance to East Anglia ONE North (km)	619603	19603														
Site Features	Likely eff	kely effect(s) of East Anglia ONE North														
	Underw	ater noi	se	Vesse	l Interac	tions	Indired prey	ct effects	s on	Chang quality	ges to wa	ater	In-con	nbination	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 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 (see paragraph 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).







Site	4	4														
Name of European Site:	Ålborg E	lborg Bugt, Randers Fjord og Mariager Fjord SAC														
Distance to East Anglia ONE North (km)	847	.7														
Site Features	Likely eff	tely effect(s) of East Anglia ONE North														
	Underw	ater no	ise	Vesse	el Interac	tions	Indired prey	ct effects	s on	Chang quality	ges to wa	ater	In-con	nbination	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 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 (see paragraph 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).







Site	5																	
Name of European Site:	Alde, 0	Ore an	d Butle	y Estu	aries S	AC												
Distance to East Anglia O	NE Nort	h (km)	: 3.4 (c	able co	orridor)												
Site Features	Likely	effect(s) of Ea	st Angli	a ONE	North												
	Perma	physical i disturbance						nering o ased ended ent	due to		nobilisa minated ents			rwater i		In-cor	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 (a)	N (a)	N (a)	N (a)	N (a)	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 as features are primarily sedimentary (see paragraphs 120 and 121 of the HRA Screening Report (APP-044)).





Name of European Site:	S Alde-Ore l 3.2	Estuary S	SPA and F	Ramsar								
Site Features		` ′	East Angl				1			Ι		
	Collision	n mortality	1	Displace	ement/Dist	urbance	Barrier	Effect		Cumula combin		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding lesser black-backed gulls Larus fuscus		Y (a)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (h)	Y (a)	N (h)
Breeding marsh harrier Circus aeruginosus		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)
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 (see paragraph 265 of the HRA Screening Report (APP-044)).

5.3.2 Information to Support AA – Screening Matrices



- b) Evidence indicates that lesser black-backed gulls are not affected by displacement, disturbance or barrier effects at offshore wind farms (see Table 12.4 Chapter 12 Offshore Ornithology (APP-060).
- 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 (see section 5.1 of Appendix 12.2 (APP-470)). It is highly unlikely that avocets from this SPA will migrate through the East Anglia ONE North windfarm 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 windfarm 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 windfarm site. However, only very small numbers of terns of any species were observed in the East Anglia ONE North site in surveys (see section 5.2 of Appendix 12.2 (APP-470)). 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 were not observed during bird surveys at the East Anglia ONE North windfarm site (see section 5.1 of Appendix 12.2 (APP-470)). 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (screened in as per paragraph 266 of the HRA Screening Report (APP-044) however 0 collisions assessed for project-alone so no HRA assessment required within the Information to Support Appropriate Assessment Report (APP-043)).







Site	7														
Name of European Site:	Anhol	t og hav	et nor	d for SA	С										
Distance to East Anglia ONE North (km)	907														
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
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 (see paragraph 218 and 219 for harbour seal and 189 and 190 for grey seal and Table 7.3 of the HRA Screening Report (APP-044).







Site	8														
Name of European Site:	Archip	el des	Glénan	SAC											
Distance to East Anglia ONE North (km)	768														
Site Features	Likely 6	ely effect(s) of East Anglia ONE North derwater noise													
	Underv	vater no	oise	Vessel	Interact	ions	Indirect	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 (see paragraphs 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).







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	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Grey seal Halichoerus grypus	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Harbour seal Phoca vitulina	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

Fish

Site	Likely	y effect	(s) of E	ast An	glia ON	IE Nort	th														
Features	habitat loss physical disturbance		to ind	thering creased ended nent		of co	nobilisa ntamina nents			rwater /ibratio		1	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 (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)

5.3.2 Information to Support AA – Screening Matrices







Site				9																	
Name of Eur	opear	Site:		Baie	de Ca	nche e	et coul	oir des	trois e	stuaire	es SAC										
Distance to North (km)	East A	Anglia (ONE	199																	
Sea lamprey Petromyzon marinus	N (b)																				
River lamprey Lampetra fluviatilis	N (b)																				
Allis shad Alosa alosa	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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).
- 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 (see Appendix 10.1 (APP-462).







Site	10														
Name of European Site:	Baie De	Morlai	x SAC												
Distance to East Anglia ONE North (km)	595														
Site Features	Likely e	ffect(s)	of East	Anglia C	NE Nort	:h									
	Underw	ater noi	se	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
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 (see paragraphs 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).







Site	11														
Name of European Site:	Baie c	le 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 no	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour 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 (see paragraph 218 and 219 for harbour seal and paragraphs 167 and 168 for harbour porpoise and Table 7.3 of the HRA) Screening Report (APP-044))..





Site 12 Name of European Site: Baie de Seine Occidentale SPA **Distance to East Anglia ONE** 380 North (km) Site Features Likely effect(s) of East Anglia ONE North Displacement/Disturbance **Barrier Effect** Collision mortality Cumulative/In-combination 0 D С D 0 D 0 0 Breeding, wintering and N(b) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(b) N(b) passage waterbirds

- 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 (see section 5.1 of Appendix 12.2 (APP-470), none of SPA features were recorded in the East Anglia ONE North windfarm site). Also see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site	13														
Name of European Site:	Baie c	le Seine	e Orient	ale SAC	;										
Distance to East Anglia ONE North (km)	386														
Site Features		effect(s water n	<i>'</i>	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)
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 (see paragraph 218 and 219 for harbour seal and paragraphs 167 and 168 for harbour porpoise and Table 7.3 of the HRA).





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 D 0 D С 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 potential for LSE (see paragraph 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal and Table 7.3 of the HRA Screening Report (APP-044)).

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									
	Underv	vater no	oise	Vessel	Interact	ions		t effects	on	_	es to wat	ter	In-com	bination	
	С	0	D	С	0	D	prey C	0	D	quality C	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraph 218 and 219 for harbour seal and Table 7.3 of the HRA Screening Report (APP-044)).





Site 16

Name of European

Bancs des Flandres SAC

Site:

Distance to East **Anglia ONE North** 110

(km)

Marine Mammals

Site Features	Likely 6	effect(s) o	f East An	glia ONE	North										
	Underv	vater nois	se	Vessel	Interaction	ons	Indirect	t effects c	n 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	orary cal bance		Smoth increa suspe sedim	ended	ue to		nobilisati minate d 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:	Bancs de	es 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 (see paragraph 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise and Table 7.3 of the HRA Screening Report (APP-044)).
- b) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.







Site Name of Euro Distance to Ea North (km)			NE	17 Bassu 203	relle Sa	ndbank	SAC											
Site Features		y effec manen		ast Angli Temp disturb	orary ph		Smoth increa	nded	ue to		obilisation minated ents	on of		water no	oise	In-cor	nbinatior	า
	С	0	D	С	0	D	C	O	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) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) 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.

Breeding Great bittern Botarus stellaris

Breeding Eurasian marsh harrier

Breeding Little tern Sterna albifrons

Circus aeruginosus







Name of European Site.	Benacre to E 19 (onshore			A								
Site Features	Likely ef	ffect(s) of I	East Anglia	a ONE No	rth							
	Collision	n 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

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

N (a)





Site 19 **Benfleet & Southend Marshes SPA and Ramsar** Name of European Site: 94 (cable corridor) **Distance to East Anglia ONE** North (km) Likely effect(s) of East Anglia ONE North Site Features 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species were recorded in the East Anglia ONE North windfarm site). Also see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







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 In-combination Underwater noise Vessel Indirect effects on Changes to Interactions water quality prey 0 С 0 D С 0 D С 0 D С D С 0 D N(a) Grey seal N(a) Halichoerus grypus **Benthic Habitats** Smothering due Site Permanent loss Temporary 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 0 D 0 D D N (b) N (b) N (b) Ν Ν Ν Ν Ν Ν Ν N (b) N (b) Coastal Ν Ν Ν Ν (b) (b) (b) (b) (b) (b) (b) lagoons (b) (b) (b) (b) Submerged N (b) N (b) Ν N (b) N (b) N (b) Ν Ν Ν Ν Ν Ν Ν Ν Ν Ν or partially (b) (b)



Site		20													
Name of European	n Site:	Berw	ickshi	re and	North	Northu	mberla	and Co	ast SA	C					
Distance to East A North (km)	Anglia ONE	414 (windfa	rm site	e) and 4	409 (of	fshore	cable	corrid	or)					
submerged sea caves															
	ce between the potential for LSE		-	_		_					-		from this	site would	

b) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see section 5.2.1 of the HRA Screening Report (APP-044)).







Site 21 Name of European Site: Black Distance to East Anglia ONE 114 North (km)	water Es	stuary S	PA and F	Ramsar								
Site Features	Likely	effect(s)	of East A	nglia ONI	E North					_		
	Collisio	on morta	ality	Displace	ement/Dis	turbance	Barrier I	Effect		Cumula combina		
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features brent goose, dunlin, ringed plover, blacktailed godwit <i>Limosa limosa limosa</i> , grey plover		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (f)	N (f)	N (f)
Nonbreeding hen harrier Circus cyaneus		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (f)	N (f)	N (f)
Breeding pochard		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (f)	N (f)	N (f)
Breeding ringed plover		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (f)	N (f)	N (f)
Breeding little tern		N (e)		N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)	N (e)

- a) Survey data show little or no evidence of Blackwater Estuary SPA features occurring in the East Anglia 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species were recorded in the East Anglia ONE North windfarm site).
- 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 (see section 5.1 of Appendix 12.2 (APP-470), this species was not recorded in the East Anglia ONE North windfarm 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 (see section 5.1 of Appendix 12.2 (APP-470), this species was not recorded in the East Anglia ONE North windfarm 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 (see section 5.1 of Appendix 12.2 (APP-470), this species was not recorded in the East Anglia ONE North windfarm site).
- 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 (see section 5.1 of Appendix 12.2 (APP-470), this species was not recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044)).

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Site 22

Name of European

Borkum-Riffgrund (Borkum Reef Ground) SCI

Site:

Distance to East

Anglia ONE North

(km)

Marine Mammals

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	_	anent at loss		Temp physic distur	,		Smoth increa susper sedime	sed nded	due to		nobilisa ntamina nents			water i			omagne (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 <i>Alosa</i>																					
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 (see paragraph 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report (APP-044)).
- b) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 10.1 (APP-458) 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 No	rth							
	Collision r	nortality		Displace	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-co	mbination
	С	0	D	С	0	D	С	0	D	С	0	D
Nonbreeding seabird assemblage including as named features black-throated diver <i>Gavia arctica</i> , 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).

Site



24

С

N (a)

D

N (a)

0

N (a)

С

Submarine structures made by leaking gases

N (a)

0

N (a)

D

N (a)

С

N (a)





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 Temporary physical Smothering due to Re- mobilisation of Underwater noise In-combination Permanent loss disturbance increased contaminated and vibration suspended sediments sediment

D

N (a)

С

N (a)

0

С

N (a)

D

N (a)

0

С

N (a)

D

N (a)

0

N (a)

D

N (a)

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see section 5.2.1 of the HRA Screening Report (APP-044)).

0

N (a)





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/Dist	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 (see Appendix 12.2 Annex 4 (APP-470)).
- 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species were recorded in the East Anglia ONE North windfarm site).
- 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 (see section 5.1 of Appendix 12.2 (APP-470), common terns recorded in very low numbers within the East Anglia ONE North windfarm 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 Breydon Water SPA and Ramsar (see Table 8.2 of the HRA Screening Report (APP-044).





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 Eas	st Anglia Ol	NE North of	fshore proje	ect area						
	Collision r	mortality		Displacen	nent/Disturb	ance	Barrier Ef	fect		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 (see Appendix 12.2 Annex 4 (APP-470)).
- 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species were recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





27 Site 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 D С С С 0 0 D 0 D D Nonbreeding common guillemots Uria N (a) N (b) N (b) N (b) N (b) N (b) N (b) N (c) N (c) N (c) aalge and razorbills Alca torda

- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).



Site	28												
Name of European Site:	Buchan Ne	ess to Col	lieston C	oast SPA									
Distance to East Anglia ONE North (km)	511												
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth								
	Collision	ely effect(s) of East Anglia ONE North lision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination											
	С	0	D	С	0	D	С	0	D	С	0	D	
Breeding seabird assemblage, including as named features kittiwake, shag <i>Phalacrocorax aristotelis</i> , fulmar, guillemot, herring gull <i>Larus argentatus</i>		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)	

- a) Buchan Ness to Collieston Coast SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia ONE North site are likely to be very small relative to BDMPS see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site 29

Name of European Site: Calf of Eday SPA

Distance to East Anglia ONE 818

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-com	bination
	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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site	30														
Name of European Site:	Cap S	izun S <i>A</i>	/C												
Distance to East Anglia ONE North (km)	723														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indirec	t effects	on	Change quality	es to wat	ter	In-com	bination	
	С	0	D	С	0	D	Ć	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	t range o	of East A	nglia Ol	NE North	and the	extent c	of anv eff	ect on in	dividuals	from thi	s site wo	uld resu	It in no

potential for LSE (see paragraphs 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North (km)	31 Chaus 510	sey SA(;												
Site Features		effect(s water n		t Anglia (ONE No Interact		Indired	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	notontio	Limpoot	rongo	of East A	nalia ON	IE North	and the	ovtont	of any of	fact on in	dividuale	from th	io oito wo	uld roou	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 (see paragraphs 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).







Site Name of European Site:	32 Chaus	ssée de	Sein S	AC																		
Distance to East Anglia ONE North (km)	743																					
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									
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D							
Grey seal	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)							
a) The distance between the	e potentia	l impact	range	of East A	nalia ON	NE North	and the	extent	of anv eff	ect on in	dividuals	from th	is site wo	ould resu	lt in no							

potential for LSE (see paragraphs 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).

Site	33												
Name of European Site:	Ches	il Beach	and The	Fleet SP	A & Rams	ar							
Distance to East Anglia ONE North (km)	386 (windfarm	n site) and	d 339 (off	shore cal	ole corrid	lor)						
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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044).

Site 34 **Chichester and Langstone Harbours SPA & Ramsar** Name of European Site: **Distance to East Anglia ONE** 227 (windfarm site) and 274 (cable corridor) North (km) Site Features Likely effect(s) of East Anglia ONE North Displacement/Disturbance Cumulative/In-Collision mortality **Barrier Effect** combination С С 0 D С 0 D С 0 D 0 Migratory waterbird assemblage N (a) N (c) N (c) N (c) 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 Breeding little tern, common tern, N (b) Sandwich tern

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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





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)

Site Features	Likely ef	fect(s) of	East Angl	ia ONE N	orth							
	Collision	mortality		Displace	ement/Dis	turbance	Barrier I	Effect		Cumula combina		
	C O D N (a)			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 (c)	N (c)	N (c)
Nonbreeding 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 (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding pochard		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding ringed 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 the feature 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm site).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 Colne Estuary SPA and Ramsar (see Table 8.2 of the HRA Screening Report (APP-044).



Site	36											
Name of European Site:	Copinsay	SPA										
Distance to East Anglia ONE North (km)	784											
Site Features	Likely et	ffect(s) of	East Angl	ia ONE N	orth							
	Collision	Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance Barrier Effect comb										
	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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site 3	7											
Name of European Site: C	oquet Islaı	nd SPA										
Distance to East Anglia ONE 4: North (km)	10											
Site Features	Likely et	fect(s) of	East Angl	ia ONE N	orth							
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	Effect		Cumulat		
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding roseate tern <i>Sterna dougallii</i> , Arctic tern, common tern, Sandwich tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Coquet Island SPA is far beyond the maximum foraging range of designated seabird species (all less than 55km) so has no breeding season connectivity. Proportions of these populations migrating through the East Anglia ONE North site are likely to be very small relative to BDMPS (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).



Site	38														
Name of European Site:	Côte E	De Gran	it Rose	-Sept-Ile	s SAC										
Distance to East Anglia ONE North (km)	557														
Site Features	Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interacti	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraphs 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).





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	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 curlew, dunlin, grey-lag goose <i>Anser anser</i> , pintail, red-breasted merganser, whooper swan, bar-tailed godwit, oystercatcher <i>Haematopus</i> ostralegus, wigeon, scaup <i>Aythya marila</i> , knot and redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding common tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (d)	N (d)	N (d)
Breeding osprey Pandion haliaetus		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)

- a) Survey data show little or no evidence of Cromarty Firth SPA features occurring in the East Anglia 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044).





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)

- 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 Cromarty Firth SPA and Ramsar (see Table 8.2 of the HRA Screening Report (APP-044).







Site	40	40													
Name of European Site:	Crouch an	ouch 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														
	Collisi	Collision mortality		Displacement/Disturbance			Barrier	Effect		Cumulative/In-combination					
	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 (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 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044).

Site



41



Name of European Site: **Deben Estuary SPA & Ramsar Distance to East Anglia ONE** 18 (windfarm site) and 72 (cable corridor) North (km)

Site Features	Likely ef	Likely effect(s) of East Anglia ONE North													
	Collision mortality			Displace	ement/Dist	urbance	Barrier E	ffect		Cumulative/In-combination					
	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 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 (see section 5.1 of Appendix 12.2 (APP-470), this species was not recorded in the East Anglia ONE North windfarm 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 (see section 5.1 of Appendix 12.2 (APP-470), this species was not recorded in the East Anglia ONE North windfarm 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 Deben Estuary SPA and Ramsar (see Table 8.2 of the HRA Screening Report (APP-044).







Site	42	42													
Name of European Site:	Dengie SP	A & Rams	ar												
Distance to East Anglia ONE North (km)	115 (windf	115 (windfarm site) and 68 (offshore cable corridor)													
Site Features	Likely	Likely effect(s) of East Anglia ONE North													
	Collisio	ion mortality		Displacement/Disturbance			Barrier	Effect		Cumulative/In-combination					
	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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044).



Site Name of European Site:	43 Dogge	erbank	SCI													
Distance to East Anglia ONE North (km)	346															
Site Features		effect(s water no		t Anglia Vessel	ONE No Interact		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 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 (see paragraph 218 and 219 for harbour seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report.







Site Name of European Site:	44 Dogge	ersbank	SAC													
Distance to East Anglia ONE North (km)	216															
Site Features	Likely	Likely effect(s) of East Anglia ONE North														
	Underwater noise				Vessel Interactions			Indirect effects on prey			es to wa	ter	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 (see paragraph 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report (APP-044)).





Site 45	45													
Name of European Site: Do	rnoch Firtl	h and Loc	h Fleet S	PA & Rar	nsar									
Distance to East Anglia ONE 717 (windfarm site) and 713 (offshore cable corridor) North (km)														
Site Features	Likely effect(s) of East Anglia ONE North													
	Collision mortality			Displace	ement/Dis	turbance	Barrier	Effect		Cumula				
	С	0	D	С	0	D	С	0	D	С	0	D		
Wintering and passage waterbird assemblage including as named features curlew, dunlin, greylag goose wigeon, bar-tailed godwit, teal, oystercatcher		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)		
Breeding osprey		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		

- a) Survey data show little or no evidence of these 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm 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 (see section 5.1 of Appendix 12.2 (APP-470), this species was not recorded in the East Anglia ONE North windfarm 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 (see Table 8.2 of the HRA Screening Report (APP-044).



Site	46															
Name of European Site:	Dorno	Dornoch Firth and Morrich More SAC														
Distance to East Anglia ONE North (km)	760															
Site Features	Likely	effect(s	of Eas	t Anglia	ONE No	rth										
	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	
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 (see paragraph 218 and 219 of the HRA Screening Report (APP-044).



47		_												
Dráby	Vig SA	C												
663														
Likely effect(s) of East Anglia ONE North														
Underwater noise			Vessel	Interact	ions	Indirec prey	t effects	on	_	ter	In-combination			
С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
	Dråby 663 Likely (Underv	Dråby Vig SA 663 Likely effect(s) Underwater no	Dråby Vig SAC 663 Likely effect(s) of Eas Underwater noise C O D	Dråby Vig SAC 663 Likely effect(s) of East Anglia (Underwater noise Vessel C O D C	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE Not Underwater noise Vessel Interaction C O D C O	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions C O D C O D	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirector prey C O D C O D C	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise	Dråby Vig SAC 663 Likely effect(s) of East Anglia ONE North Underwater noise	Dråby Vig SAC 663 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 (see paragraph 218 and 219 of the HRA Screening Report (APP-044).



5.3.2 Information to Support AA – Screening Matrices

48														
Düner	landsc	haft Sü	d-Sylt S	AC										
459														
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
N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
	Likely Under	Dünenlandsc 459 Likely effect(s Underwater no	Dünenlandschaft Sü 459 Likely effect(s) of Eas Underwater noise C O D	Dünenlandschaft Süd-Sylt S 459 Likely effect(s) of East Anglia Underwater noise C O D C	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE No Underwater noise Vessel Interact C O D C O	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions C O D C O D	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions Indirector prey C O D C O D C	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise	Dünenlandschaft Süd-Sylt SAC 459 Likely effect(s) of East Anglia ONE North Underwater noise

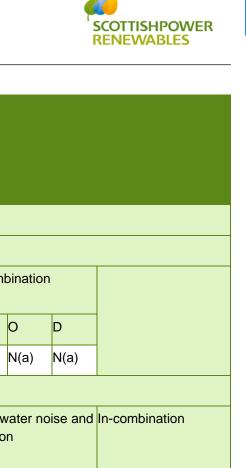
a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraphs 189 and 190 and Table 7.3 of the HRA Screening Report (APP-044)).

Site



49





Name of European Si	te:		Dunes	De La F	Plaine N	laritime	• Flama	nde SA	C									
Distance to East Ang North (km)	lia ONI	E	134 (wi	ndfarm	site) a	nd 129	(offsho	re cabl	e corrid	or)								
Marine Mammals																		
Site Features	Likely	effect(s) of Eas	t Anglia	ONE N	lorth												
	Under	water n	oise	Vesse	Interac	ctions	Indired	t effect	s on	Change quality	es to wa	ater	In-com	binatio	า			
	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)			
Benthic Habitats					-		<u> </u>		-	<u>'</u>					<u>'</u>			
Site Features	Perma	anent lo	SS	Tempo	orary ph pance	ysical			ue to pended			on of	Underv		oise and	In-com	nbinatior	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (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 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 (see paragraph 218 and 219 of the HRA Screening Report (APP-044).

b) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) 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.

Applicable to East Anglia ONE North





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 (see Table 8.2 of the HRA Screening Report (APP-044).
- b) Peregrines breeding in the UK normally remain close to their breeding areas throughout the year, and are therefore very unlikely to migrate offshore (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





Site 51

Essex Estuaries SAC Name of European Site:

Distance to East Anglia ONE

73 (offshore cable corridor)

North (km)

Benthic Features

Site Features	Likely	effect(s)	of East	Anglia (ONE No	rth												
	Perma	anent lo	SS	Temp physic disturi	cal		Smoth increa suspe sedim	ended	ue to		nobilisati minated 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
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. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).

Marine Mammals

Site Features	Likely e	effect(s)	of East	t Anglia C	ONE Nor	th									
	Underw	derwater noise Vessel Interactions Indirect effects on quality In-combination													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D







Site Name of European Site: Distance to East Anglia ONE North (km)		sex Estu offshor		AC corrido	r)										
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 c	of East A	nglia ON	IE North	and the	extent o	f any eff	ect on inc	dividuals	from this	s site wo	uld resul	t in no

potential for LSE (see paragraphs 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).





52 Site Estuaire De La Canche, Dunes Picardes Plaquees Sur L'ancienne Falaise, Foret D'hardelot Et Falaise D'equihen Name of European Site: SAC 187 **Distance to East Anglia ONE** North (km) Site Features Likely effect(s) of East Anglia ONE North Vessel Interactions Underwater noise Indirect effects on Changes to water In-combination quality prey С 0 D С 0 D С 0 D C 0 D С 0 D 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 potential for LSE (see paragraphs 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).





Site	53														
Name of European Site:	Estuai	re de la	Seine	SCI											
Distance to East Anglia ONE North (km)	356														
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 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 (see paragraphs 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).





54 Site

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	physic	-		Smoth increa suspe sedim	ended	due to		obilisa Itamina ents			water i			omagn (EMF)	etic	In-cor	nbinatio	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
River lamprey	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraphs 189 and 190, paragraphs 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).





54 Site

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)

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 and Evidence Plan Process (EPP) Appendix 10.1 (APP-462).

Site 55 Name of European Site: **Exe Estuary SPA & Ramsar** 443 (windfarm site) and 397 (offshore cable corridor) **Distance to East Anglia ONE** North (km) Likely effect(s) of East Anglia ONE North Site Features Displacement/Disturbance Collision mortality **Barrier Effect** Cumulative/In-combination С 0 D С С С 0 0 D 0 D D Migratory waterbird assemblage N (a) N (b) N (b) N (b) including as named features brent goose, dunlin, oystercatcher, blacktailed godwit, grey plover, Slavonian grebe Podiceps auritus, avocet

- 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm site) (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site 56

Name of European Site: Fair Isle SPA

Distance to East Anglia ONE 827

Site Features	Likely ef	fect(s) of I	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
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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- b) Fair Isle wren is a resident Shetland subspecies that is thought never to leave the island (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site 57

Name of European Site: Falaise du Bessin Occidental SPA

Distance to East Anglia ONE

396

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dist	turbance	Barrier E	Effect		Cumulat	tive/In-cor	mbination
	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) The 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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



0

D



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

Collision mortality

Displacement/Disturbance

Barrier Effect

Cumulative/In-combination

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

0

D

С

0

D

- c) Cormorants, shags and red-breasted mergansers do not normally occur at the East Anglia ONE North site based on bird survey data (see section 5.1 of Appendix 12.2 (APP-470). 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 396km 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- f) Dartford warbler is a resident species that is unlikely to move from this SPA (see Table 8.2 of the HRA Screening Report (APP-044)).



East Anglia ONE North Offshore Windfarm 5.3.2 Information to Support AA – Screening Matrices

Site	57											
Name of European Site:	Falaise d	u Bessin C	Occidental	SPA								
Distance to East Anglia ONE North (km)	396											
Site Features	Likely 6	effect(s) of	East Angli	a ONE No	orth							
	Collisio	n mortality		Displace	ement/Dis	turbance	Barrier I	Effect		Cumula	tive/In-co	mbination
	С	0	D	С	0	D	С	0	D	С	0	D
g) The predicted effect attribut assessment for these feature		•				_	•				in-combir	nation

58





Site

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

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

East Anglia
ONE North (km)

M	ari	ine	Ma	mr	nals
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Site Features	Likely	effect(s	s) of Eas	st Anglia	ONE N	lorth									
	Unde	rwater r	noise	Vesse Intera	el ctions		Indire prey	ct effec	ts on	Chang qualit	ges to v	vater	In-coi	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 Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

Benthic Habitats

Site Features	Perm	anent lo	oss	Temp physi distur			increa	ended	lue to		nobilisat minate nents			rwater r ibration		In-co	mbinati	ion
	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)
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)





5.3.2 Information to Support AA – Screening Matrices

Site	58																	
Name of European Site:	Falai	ses du (Cran au	ıx Oeuf	s et du	Cap Gri	is-Nez,	Dunes	du Cha	telet, Ma	arais de	Tardin	ghen e	Dunes	de Wis	sant S	AC	
Distance to East Anglia ONE North (km)	162 (windfar	rindfarm 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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report (APP-044))..
- b) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) 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.



5.3.2 Information to Support AA – Screening Matrices



Site	59														
Name of European Site:	Faray	and Ho	Im of F	aray SA											
Distance to East Anglia ONE North (km)	820														
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)





Site 60 Name of European Site: Farne Islands SPA Distance to East Anglia ONE North 483 (km) Likely effect(s) of East Anglia ONE North Site Features Displacement/Disturbance Collision mortality Barrier Effect Cumulative/In-combination С 0 D С 0 С D С D 0 D 0 Breeding Arctic tern, common tern, N (a) N (a) N (b) N (b) N (a) N (a) N (a) N (a) N (a) N (b) Sandwich tern

- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).

Applicable to East Anglia ONE North





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	ffect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- b) Dunlin, whimbrel and red-necked phalarope have not been observed migrating through the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470). 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 (see Table 8.2 of the HRA Screening Report (APP-044). Dunlin and whimbrel from Fetlar SPA migrate south, but are unlikely to pass through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





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 Angli	a ONE No	orth								
	Collision	n mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination											
	С	0	D	С	0	D	С	0	D	С	0	D	
Wintering and passage waterbird assemblage including as named features 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-throate diver, scaup, velvet scoter Melanitta fusca	۱	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 (see Table 8.2 of the HRA Screening Report (APP-044).







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 (see Table 8.2 of the HRA Screening Report (APP-044).





Site 63

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

550

Distance to East Anglia ONE North (km)

North (Kill)												
Site Features	Likely eff	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 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044).

5.3.2 Information to Support AA – Screening Matrices



- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).

Site 64

Firth of Tay & Eden Estuary Name of European Site:

SAC 555

Distance to East Anglia ONE

North (KM)															
Site Features	Likely e	effect(s)	of East A	nglia Ol	NE North	1									
	Under	nderwater noise Vessel interactions Indirect effects on quality In-combination													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).





Site 65

Name of European Site: Flamborough and Filey Coast SPA

Distance to East Anglia ONE

North (km)

246

Site Features	Likely e	effect(s) of	East Angl	ia ONE N	orth							
	Collisio	n mortality	1	Displac	ement/Dis	turbance	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)

- Band model estimates of collision mortality indicate that LSE cannot be ruled out at the Screening stage (see Appendix 12.1 Annex 4 (APP-470)).
- Kittiwakes are not considered to be at risk of disturbance and displacement or barrier effects at offshore wind farms therefore LSE can be ruled out.
- The predicted effect attributable to the proposed East Anglia 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see paragraph 269 of the HRA Screening Report (APP-044). Breeding gannets from Flamborough & Filey Coast SPA may therefore be affected by displacement (see Table 8.2 of the HRA Screening Report (APP-044). 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.

5.3.2 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see paragraph 271 of the HRA Screening Report (APP-044).
- 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 (see paragraph 269 of the HRA Screening Report (APP-044).







Site Name of Eu Distance to North (km)			E		orough ffshore													
Site	Likely 6	effect(s)	of East	Anglia O	NE Nort	h												
Features	Perma	nent los	SS	Temp disturb	orary ph cance	ysical	Smoth increating suspensedim	nded	ue to		obilisation minated ents	on of		water nation	oise	In-cor	nbinatior	n
	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. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044)







Site 67 Name of European Site: Fo	, orth Island	s SPA										
Distance to East Anglia ONE 51 North (km)		3 3 1 A										
Site Features		fect(s) of mortality	East Angli		orth 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 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





5.3.2 Information to Support AA – Screening Matrices

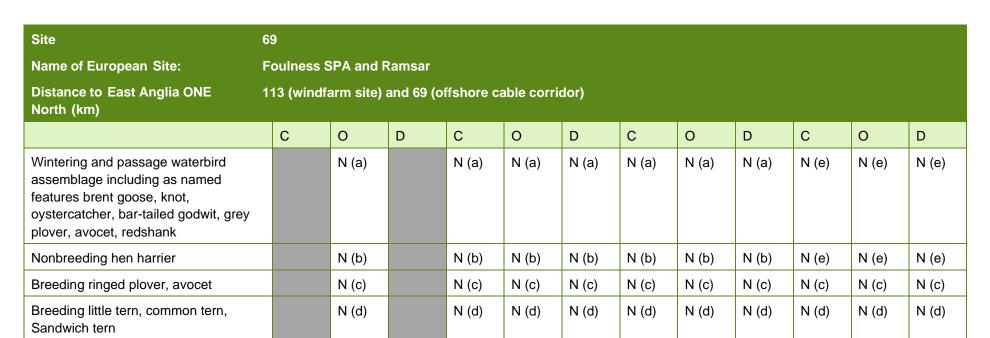
Site	88												
Name of European Site:	oula SPA												
Distance to East Anglia ONE North (km)	901												
Site Features	Likely effect(s) of East Anglia ONE North												
	Collision	Collision mortality			splacement/Disturbance			Barrier Effect			Cumulative/In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	
Breeding seabird assemblage including as named features 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).

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







- 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 (see section 5.1 of Appendix 12.2 (APP-470).
- 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 (see section 5.1 of Appendix 12.2 (APP-470), none of these species/SPA features were recorded in the East Anglia ONE North windfarm site) (see Table 8.2 of the HRA Screening Report (APP-044)).
- c) Ringed plover and avocet have not been observed during bird site-specific surveys (see section 5.1 of Appendix 12.2 (APP-470). 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. (see Table 8.2 of the HRA Screening Report (APP-044)).





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)

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site 70

Name of European Site: Fowlsheugh SPA

Distance to East Anglia ONE

575

Site Features	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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site 71

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

Distance to East Anglia ONE 154

Site Features Likely effect(s) of East Anglia ONE North												
	Collision mortality			Displacement/Disturbance			Barrier Effect			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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site	72	72											
Name of European Site:	Gibraltar l	Sibraltar Point SPA and Ramsar											
Distance to East Anglia ONE North (km)	151 (wind	151 (windfarm site) and 131 (offshore cable corridor)											
Site Features	Likely effect(s) of East Anglia ONE North												
	Collisio	Collision mortality		Displacement/Disturbance			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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site	73	73											
Name of European Site:	Great Yarr	reat Yarmouth and North Denes SPA											
Distance to East Anglia ONE North (km)	33												
Site Features	Likely e	ffect(s) of	East Angli	a ONE No	orth								
	Collision	Collision mortality			cement/Disturbance Barrier Effect Cui			Cumulat	mulative/In-combination				
	С	0	D	С	0	D	С	0	D	С	0	D	
Breeding little tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)	

- a) Great Yarmouth & North Denes SPA is beyond the maximum foraging range of little tern (11km) and foraging tends to be coastal so has no breeding season connectivity. Proportions of this population migrating through the East Anglia 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





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	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. (see paragraph 272 of the HRA Screening Report (APP-044))
- 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) (see paragraph 273 of the HRA Screening Report (APP-044)).
- 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 (see paragraph 273 of the HRA Screening Report (APP-044)).





Site 74

Name of European Site: **Greater Wash SPA**

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

- 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.
- Displacement of little gulls by offshore windfarms appears to be negligible**, indicating no LSE for this SPA feature as a consequence of displacement or barrier effects (see paragraph 264 of the Information to Support Appropriate Assessment Report (APP-043)).
- g) Surveys found no common scoters in the East Anglia ONE North site since this species favours waters <20m in depth (see section 5.1 of Appendix 12.2 (APP-470). 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Appendix 12.1 (APP-469)).

Site

North (km)
Site Features

phocoena

Name of European Site:

Distance to East Anglia ONE

Harbour porpoise Phocoena



С

N(a)

D

N(a)

0

N(a)

С

N(a)

0

N(a)



С

N(a)

D

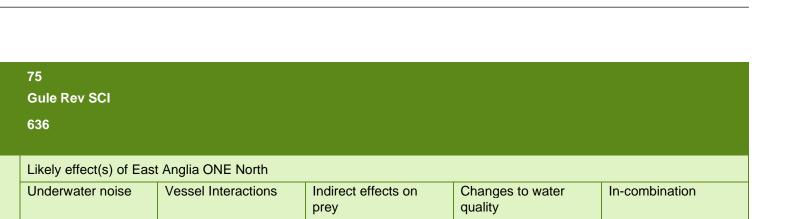
N(a)

0

N(a)

D

N(a)



0

N(a)

D

N(a)

С

N(a)

0

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 (see paragraphs 167 and 168 of the HRA Screening Report (APP-044)).

D

N(a)

С

N(a)





Site Name of European Site: Distance to East Anglia ONE North (km)	76 Gullm 855	arsfjorc	len SA(:											
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 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 (see paragraphs 218 and 219 for harbour porpoise of the HRA Screening Report (APP-044)).





Site 77

Haisborough, Hammond and Winterton SAC Name of European Site:

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 Nortl	h												
Features		nent troductio ediment	n of	Tempo disturb	rary phy ance	/sical		ering du sed susp ent			obilisatio ninated ents	n of	Undervand vib	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. For the purposes of HRA screening indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).



N(a)

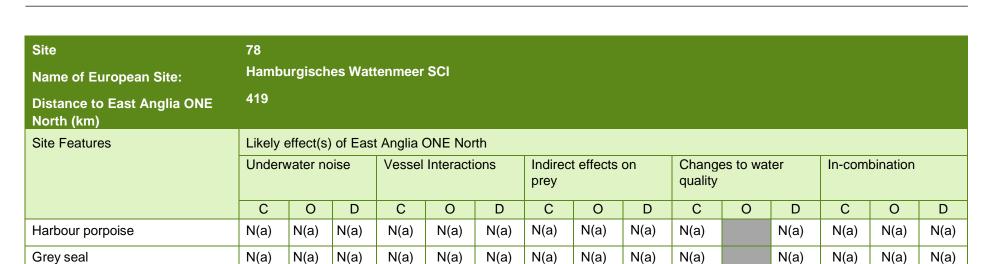
N(a)

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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report (APP-044)).

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

N(a)

Harbour seal







Site 79 Name of European Site: **Hamford Water SPA and Ramsar Distance to East Anglia ONE** 86 (windfarm site) and 38 (cable corridor) North (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination 0 С С 0 D С D 0 D С 0 D Wintering and passage waterbird N (a) N (c) N (c) N (c) assemblage including as named features teal, brent goose, ringed plover, black-tailed godwit, grey plover, avocet, shelduck, redshank Breeding little tern 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site 80 Name of European Site: **Havet omkring Nordre Rønner SAC Distance to East Anglia** 837km **ONE North (km)** Likely effect(s) of East Anglia ONE North Site Features **Underwater Noise** Vessel interactions Indirect effects on prey Changes to water Cumulative/Incombination quality С С 0 D С 0 D С 0 D 0 D Grey seal N (a) Harbour seal 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 ((see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal, of the HRA Screening Report (APP-044))

Site	81															
Name of European Site:	Helgol	and mit	Helgo	ander F	elssock	el SAC										
Distance to East Anglia ONE North (km)	405															
Site Features	Likely 6	Likely effect(s) of East Anglia ONE North														
	Underv	vater 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	







Site	81													
Name of European Site:	Helgo	land mi	t Helgo	lander F	elssock	el SAC								
Distance to East Anglia ONE North (km)	405													
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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report (APP-044)).







Site 8	32											
Name of European Site:	lermanes:	s, Saxa V	ord and V	alla Field	SPA							
Distance to East Anglia ONE North (km))46											
Site Features	Likely effect(s) of East Anglia ONE North											
	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 gannet, guillemot, red-throated diver, puffin, fulmar, kittiwake, great skua, shag				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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site	83															
Name of European Site:	Hesse	lø med	omligg	ende ste	enrev S <i>l</i>	AC .										
Distance to East Anglia ONE North (km)	983															
Site Features	Likely	ely effect(s) of East Anglia ONE North lerwater noise														
	Under															
	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 (see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal of the HRA Screening Report (APP-044)).







Site Name of European Site:	84 Hirsho 814	olmene	, havet [,]	vest her	ior og E	llinge Å'	's udløb	SAC								
Distance to East Anglia ONE North (km)	014															
Site Features	Likely	ely effect(s) of East Anglia ONE North derwater noise Vessel Interactions Indirect effects on Changes to water In-combination														
	Under	Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality														
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	

a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal of the HRA Screening Report (APP-044)).







Site 85 Name of European Site: Hornsea Mere SPA **Distance to East Anglia ONE** 234 North (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 С С D С 0 D 0 D 0 D Nonbreeding gadwall, mute swan 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





Site 86

Name of European Site: **Hoy SPA**

Distance to East Anglia ONE

North (km)

787

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, 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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.
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).







87 Site **Humber Estuary SAC** Name of European Site: 179 (windfarm site) and 173 (offshore cable corridor) **Distance to East Anglia ONE** North (km) **Marine Mammals** Likely effect(s) of East Anglia ONE North Site Features Indirect effects on prey Changes to water quality In-combination Underwater noise Vessel Interactions and disturbance at seal haul outs С С 0 С 0 D С 0 С 0 0 D D D D 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) Grey seal Y (a) Fish Site Likely effect(s) of East Anglia ONE North Featu **Temporary** Smothering due Re- mobilisation Underwater noise Electromagnetic In-combination Permanent res physical fields (EMF) habitat loss to increased of contaminated and vibration disturbance suspended sediments sediment С С С 0 С 0 С 0 С 0 D 0 D 0 D С 0 D D D D Sea N(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) Lamp b) rey River N(N(b N(b) N(b N(b) N(b) N(b) N(b N(b) N(b) N(b N(b) lampr b) ey





Site 87

Name of European Site: Humber Estuary SAC

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

North (km)

Benthic habitats

Site Features	Pern	naner	nt loss	Tempo physica disturba	al		incre	ended	due to	of co	mobilisa ontamin ments		Unde vibrat	rwater no ion	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 (see Table 7.3 of the HRA Screening Report (APP-044).
- 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 (see Table 6.2 of the HRA Screening Report (APP-044).
- c) The distance between the offshore project area and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).





Site 88

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

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

5.3.2 Information to Support AA – Screening Matrices



Site 88

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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- c) Bittern has not been observed during bird surveys at East Anglia ONE North (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site Name of European Site:	89 Hund (und Paa	apsand	SCI												
Distance to East Anglia ONE North (km)	323															
Site Features	Likely 6	rely effect(s) of East Anglia ONE North														
	Underv	derwater noise Vessel Interactions Indirect effects on quality In-combination														
	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 (see paragraphs 218 and 219 and Table 8.2 of the HRA Screening Report (APP-044)).







Site 90 Imperial Dock Lock, Leith SPA Name of European Site: **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 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site Name of Eu Distance to North (km)			ΙE		Dowsing able cor	g, Race I ridor)	Bank an	d North	Ridge S	SAC								
Site	Likely e	effect(s)	of East A	Anglia O	NE Nortl	h												
Features	Permanent loss Temporary physical disturbance							nering di sed nded ent	ue to		obilisation minated ents	on of		water no	oise	In-con	nbination	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 (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Reefs	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).

5.3.2 Information to Support AA – Screening Matrices



Name of European Site: **Inner Moray Firth SPA & Ramsar**

92

Distance to East Anglia ONE 701 (windfarm site) and 696 (offshore cable corridor)

North (km)

Site

Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dist	urbance	Barrier E	ffect		Cumulat	ive/In-con	nbinatior
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features bar-tailed godwit, curlew, goldeneye, greylag goose, redshank, wigeon, goosander, teal, red-breasted merganser, cormorant, oystercatcher, scaup		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (d)	N (d)	N (d)
Breeding osprey		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
Breeding common tern		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (d)	N (d)	N (d)

- a) Survey data show little or no evidence of Inner Moray Firth SPA features occurring in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470)), and migrations of birds from this SPA and Ramsar are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- b) Osprey has not been observed in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), and it is extremely unlikely that any ospreys from the Inner Moray Firth SPA migrate through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044))..
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





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 (see Table 8.2 of the HRA Screening Report (APP-044))..

Site Name of European Site: Distance to East Anglia ONE North (km)	93 Isle of 524	May S	AC												
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 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 (see paragraphs 189 and 190 and Table 8.2 of the HRA Screening Report (APP-044)).





Site 94 Klaverbank SCI Name of European Site: 158 **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 prey quality C C 0 D 0 D C 0 D C 0 D С 0 D Harbour porpoise Phocoena N(a) phocoena Grey seal Halichoerus grypus N(a) Harbour seal Phoca vitulina N(a) N(a) 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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report (APP-044)).

 Site
 95

 Name of European Site:
 Knudegrund SAC

 Distance to East Anglia ONE North (km)
 746km

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





Site 95 Name of European Site: **Knudegrund SAC Distance to East Anglia** 746km **ONE North (km) Underwater Noise** Vessel interactions Indirect effects on prey Changes to water Cumulative/Inquality combination 0 0 С D D С D С 0 D 0 0 D Grey seal N (a) Harbour seal 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 ((see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal, of the HRA Screening Report (APP-044))

Site Name of European Site:	96 Koster	fjorder	-Väder	öfjorder	SAC										
Distance to East Anglia ONE North (km)	867														
Site Features	Likely (effect(s)	of East	Anglia (ONE No	rth									
	Underv	y effect(s) of East Anglia ONE North rwater noise													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)



5.3.2 Information to Support AA – Screening Matrices

Site Name of European Site:	97 Kungs	sbackaf	jorden	SAC											
Distance to East Anglia ONE North (km)	881														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	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)

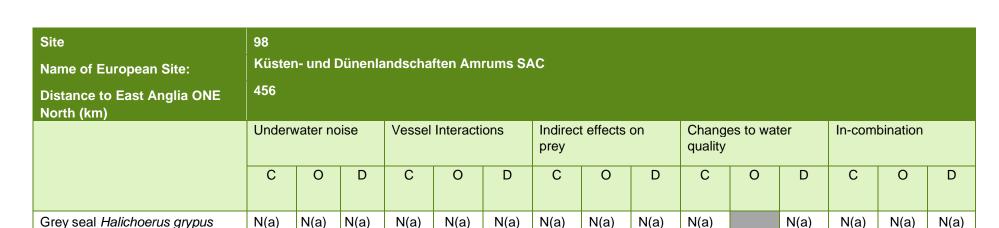
| Harbour seal Phoca vitulina | N(a) |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

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 (see paragraphs 218 and 219 for harbour seal and paragraphs 167 and 168 for harbour porpoise of the HRA Screening Report (APP-044)).

Site	98
Name of European Site:	Küsten- und Dünenlandschaften Amrums SAC
Distance to East Anglia ONE North (km)	456
Site Features	Likely effect(s) of East Anglia ONE North







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 (see paragraphs 189 and 190 of the HRA Screening Report (APP-044)).

Site	99														
Name of European Site:	Lindisfarn	e SPA and	d Ramsar												
Distance to East Anglia ONE North (km)	441 (windf	arm site)	and 435 (offshore	cable cor	ridor)									
Site Features	Likely ef	y effect(s) of East Anglia ONE North													
	Collision	Illision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination													
	С	0	D	С	0	D	С	0	D	С	0	D			
Wintering and passage waterbird assemblage including as named features wigeon, greylag goose, brent goose, sanderling, dunlin, ringed plover, goldeneye, whooper swan, black-tailed godwit, common scoter,		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)			

Site

North (km)

redshank

Name of European Site:

Distance to East Anglia ONE

red-breasted merganser, golden plover, grey plover, eider, shelduck,

Breeding little tern, roseate tern



99

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 (see section 5.1 of Appendix 12.2 (APP-470) and migrations of birds from this SPA are likely to result in negligible numbers passing through the site during migration (see Table 8.2 of the HRA Screening Report (APP-044).

N (b)

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. (see Table 8.2 of the HRA Screening Report (APP-044)

N (b)

N (b)

N (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 Lindisfarne SPA and Ramsar (see Table 8.2 of the HRA Screening Report (APP-044).

Site Name of European Distance to East A ONE North (km)		100 Littoral 238 (off																
Site Features	Perm	anent los	SS	Tempo disturb	orary phoance	ysical	increa		ue to	contan	obilisation ninate dents		Under and vil	water no	oise	In-com	nbinatio	n
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D





Site Name of European Si Distance to East Ang ONE North (km)		100 Littoral 238 (off																
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)	N (a)	N (a)
Perennial vegetation of stony banks	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Vegetated sea cliffs of the Atlantic and Baltic coasts	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Oligotrophic waters containing very few minerals of sandy plains Littorelletalia uniflorae	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)
Hard oligo- mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)

a) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458)) 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 101

Name of European Site: Littoral Seino-Marin SPA

Distance to East Anglia ONE 26' North (km)	1											
Site Features	Likely e	ffect(s) of	East Angl	ia ONE N	orth							
	Collision	n mortality	,	Displac	ement/Dis	sturbance	Barrier	Effect		Cumula	ative/In-co	mbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabirds including fulmar, shag, gannet, herring gull, great black- backed gull, kittiwake		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (f)	N (f)	N (f)
Nonbreeding winter and passage seabird assemblage including as named features red-throated diver, black-throated diver, great crested grebe, fulmar, gannet, cormorant, shag, pomarine skua Stercorarius pomarinus, great skua, Mediterranean gull Larus melanocephalus, little gull, lesser black-backed gull, herring gull, great black-backed gull, kittiwake, Sandwich tern, common tern, guillemot, razorbill		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (f)	N (f)	N (f)
Nonbreeding little egret, spoonbill Platalea leucorodia, honey buzzard Pernis apivorus, hen harrier, merlin Falco columbarius, peregrine, avocet		N (c)		N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)
Breeding peregrine		N (d)		N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)	N (d)







Site 101

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

Distance to East Anglia ONE 261

North (km)

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

- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- b) Proportions of these populations migrating through the East Anglia ONE North site are likely to be extremely small relative to BDMPS (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





Site 102

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-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Wintering and passage waterbird assemblage including as named features greylag goose, pink-footed goose, teal, Svalbard barnacle goose <i>Branta leucopsis</i> , whooper swan		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding Sandwich tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (c)	N (c)	N (c)

- a) Survey data show little or no evidence of Loch of Strathbeg SPA features occurring in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).







Site	103	ar Brod	ning V	ailarna <i>(</i>	a Rulhi	erg SAC									
Name of European Site: Distance to East Anglia ONE North (km)	673	oi Dieu	illig, v	ejierrie C	og Dalby	erg one	•								
Site Features		effect(s) water no		_	ONE Noi Interacti		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 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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).

Site	104															
Name of European Site:	LØnst	LØnstrup RØdgrund SAC														
Distance to East Anglia ONE North (km)	728km	1														
Site Features		Likely effect(s) of East Anglia ONE North Underwater noise Vessel Interactions						t effects	on	Change quality	es to wa	ter	In-combination			
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Harbour 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)	

5.3.2 Information to Support AA – Screening Matrices



Site 104

Name of European Site: LØnstrup RØdgrund SAC

Distance to East Anglia ONE 728km

North (km)

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 (see paragraphs 167 and 168 and Table 7.3 of the HRA Screening Report (APP-044)).







Site Name of European Site: Distance to East Anglia ONE North (km)	105 Lovns 699	Lovns Bredning, Hjarbæk Fjord og Skals, Simested og Nørre Ådal, Skravad Bæk SAC													
Site Features	_	Likely effect(s) of East Anglia ONE North Underwater 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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).







Site	106														
Name of European Site:	Malmö	fjord S	AC												
Distance to East Anglia ONE North (km)	859														
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 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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).







Site	107															
Name of European Site:	Marais du Cotentin et du Bessin - Baie des Veys SAC 407															
Distance to East Anglia ONE North (km)																
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)	
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 (see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal, of the HRA Screening Report (APP-044)).







Site Name of Eu Distance to North (km)			IE	_	te and L	_	nds SCI											
Site Likely effect(s) of East Anglia ONE North Features Permanent loss Temperary physical Smothering due to Re-mobilication of Underwater poiss In combinate																		
reatures	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. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044)

Breeding seabird assemblage including

as named features guillemot and

kittiwake





N (b)

N (b)

Site 109 Name of European Site: **Marwick Head SPA Distance to East Anglia ONE** 822 North (km) Site Features Likely effect(s) of East Anglia ONE North Displacement/Disturbance Collision mortality **Barrier Effect** Cumulative/In-combination С 0 0 D С 0 С D С D 0 D

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

N (a)

N (a)

N (a)

N (a)

N (b)

N (a)

N (a)

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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site Name of European Site:	110 Måses	kär SA	С												
Distance to East Anglia ONE North (km)	847														
Site Features	Likely	Likely effect(s) of East Anglia ONE North													
	Underv	water no	oise	Vessel	Interacti	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 <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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).

Site



111



Name of European Site: **Medway Estuary & Marshes SPA and Ramsar Distance to East Anglia ONE North** 147 (windfarm site) and 102 (offshore cable corridor) (km)

Site Features	Likely eff	fect(s) of E	East Anglia	a ONE No	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
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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- b) Avocet has not been observed during bird site-specific surveys site (see section 5.1 of Appendix 12.2 (APP-470). 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. (see Table 8.2 of the HRA Screening Report (APP-044)).







Site 111

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

- 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 (Thaxter et al. 2012), so would have no connectivity with East Anglia ONE North. Migrating common terns are unlikely to pass through the East Anglia ONE North site as their migration tends to be coastal where that is an option. (see Table 8.2 of the HRA Screening Report (APP-044))
- 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. (see Table 8.2 of the HRA Screening Report (APP-044))

Site 112

Name of European Site Minsmere to Walberswick Heaths and Marshes SAC

Distance to East Anglia ONE North 1.8km (offshore cable corridor)

(km)

FISN																					
Site	Likely	effect(s) of Ea	ast Ang	lia ONE	North															
Features	Permanent habitat loss C O D			Temp physic distur			Smoth increa suspe sedim	ended	due to		nobilisa ntamina nents			rwater ribratior			omagn (EMF)	etic	In-cor	nbinatio	n
	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)
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)







Site					112																			
Name of	Europe	an Site)		Mins	smer	e to V	/albers	swick	Heath	s and	Mars	shes	SAC										
Distance (km)	to Eas	t Angli	a ONE I	North	1.8k	m (o	ffshoi	e cabl	e corı	idor)														
Twaite shad	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)) (a		N a)	N (a)	N (a)	N (a)) (a			N (a)	N (a)	N (a)	N (a		N (a)	N (a)	N (a)	N (a)
Benthic	Habitat	s																						
Site	Likely	effect(s) of Ea	st Angl	ia ON	E No	rth																	
Features	Features Likely effect(s) of East A						SS	phys	porary sical urbanc		ind su	mothe creas uspen	sed nded	due to	con	mobil tamina iments		-		erwate vibratio	r noise on	e In-	combir	ation
				С	(C	D	С	0	D	С		0	D	С	0	D		С	0	D	С	0	D
Sandban covered l			0 ,	e 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	3			N (· /	(p)	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		N (b)	N (b)	N (b)	N (b			N (b)	N (b)	N (b)	N (b)	N (b)	N (b		
Reefs	overed by seawater at low tide				' '	(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)

5.3.2 Information to Support AA – Screening Matrices



Site 112

Name of European Site Minsmere to Walberswick Heaths and Marshes SAC

N (e)

Distance to East Anglia ONE North 1.8km (offshore cable corridor)

(km)

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 (see section 6.2.1, of the HRA Screening Report (APP-044)).

b) The distance between the offshore project area and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).

Site 113 Name of European Site: **Minsmere - Walberswick SPA and Ramsar Distance to East Anglia ONE** 44 (windfarm site) and 2 (offshore cable corridor) North (km) Likely effect(s) of East Anglia ONE North Site Features Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С D 0 С 0 C D C 0 D 0 Wintering shoveler, gadwall, white-N (a) N (a) N (a) N (a) N (a) N (a) N (g) N (g) N (a) N (g) fronted goose Nonbreeding hen harrier N (b) N (b) N (b) N (b) N (b) N (b) N (g) N (g) N (b) N (g) Breeding shoveler, teal, gadwall, N (c) N (c) N (g) N (g) N (c) N (c) N (c) N (c) N (c) N (g) bittern, avocet Breeding nightjar Caprimulgus N (d) N (d) N (d) N (g) N (g) N (g) N (d) N (d) N (d) N (d) europaeus

N (e)

N (e)

N (e)

N (e)

N (e)

N (e)

Breeding marsh harrier

N (e)

N (e)

N (e)





Site 113 Name of European Site: **Minsmere - Walberswick SPA and Ramsar Distance to East Anglia ONE** 44 (windfarm site) and 2 (offshore cable corridor) North (km) Breeding little tern N (f) N (f)

- 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 (see section 5.1 of Appendix 12.2 (APP-470), 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 (see section 5.1 of Appendix 12.2 (APP-470), 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- d) Survey data show no evidence of nightjar occurring in the East Anglia ONE North OWF site (see section 5.1 of Appendix 12.2 (APP-470), 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site	114	1										
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 (offsl	hore cable	corri	dor)				
Site Features	Lik	ely eff	fect(s) of East A	nglia ONE	North						
		llision ortality		Displace	ment/Distu	rbance	Barr	ier Effect		Cumulative	e/In-combir	nation
	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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).

Site



115



Name of European Site: **Moray and Nairn Coast SPA & Ramsar Distance to East Anglia ONE** 669 (windfarm site) and 666 (offshore cable corridor) North (km) Site Features Likely effect(s) of East Anglia ONE North

	, ,	(-) -										
	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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- b) Osprey has not been observed in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), and it is improbable that any ospreys from the SPA migrate through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site	116											
Name of European Site:	Mousa SP	λ.										
Distance to East Anglia ONE North (km)	868											
Site Features	Likely effect(s) of East Anglia ONE North											
	Collisio	n 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 Arctic tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)
Breeding European storm-petrel Hydrobates pelagicus		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) Mousa SPA is beyond maximum foraging range of Arctic tern (30km, Thaxter et al. 2012) so has no breeding season connectivity. The proportion of the population migrating through the East Anglia ONE North site is likely to be extremely small relative to BDMPS (see Table 8.2 of the HRA Screening Report (APP-044)).
- b) European storm-petrels were not observed in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), 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 (see Table 8.2 of the HRA Screening Report (APP-044))..
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







D

N(a)

Site 117 **Mousa SAC** Name of European Site: 872 **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

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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).

D

N(a)

С

N(a)

0

N(a)

С

N(a)

D

N(a)

0

D

N(a)

С

N(a)

0

N(a)

Site 118

Harbour seal Phoca vitulina

Name of European Site Mühlenberger Loch SPA

С

N(a)

0

N(a)

D

N(a)

С

N(a)

0

N(a)

Marine Mammals															
Site Features	Likely e	ffect(s) of	East Ang	lia ONE I	North										
	Underw	ater noise		Vessel	Interacti	ons	Indirect	effects o	n prey	Chang quality	es to wat	er	In-com	bination	
	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)
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					118																
Name of E			0.VIE			nberge	r Loch	SPA													
Distance to North (km)		Anglia	ONE		526km	1															
Site	Likely	effect((s) of Ea	ast Ang	glia ONI	E North															
Features		anent at loss		physi	oorary cal bance		increa	ended	due to		nobilisa ntamina nents			rwater /ibratio			romagn (EMF)		In-co	mbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Houting	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
Twaite shad	(b) (b) (b) (b) (b) (l) (l) (l) (b) (l) (b) (b) (b) (b) (b) (b) (b) (b) (b) (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)
Lampern	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)
Great 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)
Salmon	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)
Benthic Ha	bitats																				
Site Features	Likely	effect((s) of Ea	ast Ang	glia ONI	E North															
reatures				Per	manen	t loss	phy	nporary sical urbance		incre sus	othering eased pended ment	due to	of co	mobilis ontamin ments			erwater vibratio		In-co	mbinat	ion







Site		1	18																
Name of E	uropean Site	N	lühlenl	berger	Loch S	SPA													
Distance to North (km)																			
		С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Estuaries		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 (see paragraphs 218 and 219 for harbour seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).
- b) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) and Appendix 10.1 (APP-462) that transboundary impacts on fish and benthic habitats would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA







Site Name of European Site: Distance to East Anglia ONE North (km)	119 Natior 304	nalpark	Nieders	sächsisc	hed Wa	ttenmee	r SAC								
Site Features		effect(s water no		t Anglia (Vessel	ONE No		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 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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).







Site Name of European Site: Distance to East Anglia ONE North (km)	120 Nibe E 705	Brednin	g, Halka	ær Ådal	og Søne	derup Å	dal SAC								
Site Features		reffect(s) of East Anglia ONE North rwater noise													
	С	0	D	С	0	D	C	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	range o	of East A	nglia Ol	NE North	and the	extent c	of any eff	ect on in	dividuals	from th	is site wo	uld resu	It in no

potential for LSE (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North (km)	121 Nidinç 886	gen SA(C												
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indired	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	Ć	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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).







Site 122

Name of European Site: Noordzeekustzone SAC

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

North (km)

						_
M	lari	ne	M :	am	ma	ıle
14	ıaıı	116	IAIC	2111	ша	шэ

Site Features	Likely	effect(s)	of East Ar	nglia ONE	North										
	Unde	rwater noi	se		Interaction		Indirect	effects o	on prey	Change quality	es to wate	er	In-comb	oination	
	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	s) of Ea	st Anglia	a ONE	North															
Features	Perma	anent h	abitat	Temp physic disturb	cal		Smoth increa suspe sedim	nded	ue to		obilisat minated ents			water r ibration			omagne (EMF)	etic	In-con	nbinatio	n
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sea Lamprey	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)
Allis Shad	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)
Twaite Shad	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)





OWER

Site 122

Name of European Site: Noordzeekustzone SAC

Distance to East Anglia ONE

North (km)

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

Benthic Habitats

Site Features	Perma	anent lo	oss	Temp physic	al		increa		lue to	contai	obilisat minate			water r		In-cor	nbinatio	n
				disturt	oance		suspe sedim			sedim	ents							
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)
Mudflats and sandflats not covered by seawater at low tide	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)

- a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).
- b) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 10.1 (APP-462)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 and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458)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.

5.3.2 Information to Support AA – Screening Matrices



Site Name of European Site: Distance to East Anglia ONE North (km)	123 Nordre 851	e älvs e	stuariu	m SAC											
Site Features		effect(s) water no		t Anglia (ONE No Interact		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
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 (see paragraphs 218 and 219 and Table 8.2 of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North (km)	124 Nordv 955	ästra S	kånes h	navsomr	åde SA0	C									
Site Features		rwater noise Vessel Interactions Indirect effects on prey Changes to water quality													
	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 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 (see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for harbour porpoise, of the HRA Screening Report (APP-044))..





Site 125 Name of European Site: **North Caithness Cliffs SPA Distance to East Anglia ONE North** 761 (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance Cumulative/In-combination **Barrier Effect** C D 0 С С С 0 0 D 0 D D Breeding seabird assemblage including N (a) N (a) N (a) N (a) N (a) N (a) N (c) N (c) N (a) N (c) as named features fulmar, quillemot, kittiwake, razorbill, puffin

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

N (b)

- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).

Breeding peregrine





Site 126

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 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 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site during migration (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).

5.3.2 Information to Support AA – Screening Matrices



Site 126

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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044))
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site 127

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

69 (offshore cable corridor) **Distance to East Anglia ONE**

Site	Likely e	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. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).







Site	128													
Name of European Site:	Northumk	oria Coast	SPA and	Ramsar										
Distance to East Anglia ONE North (km)	347 (wind	farm site)	and 340	(offshore	cable co	rridor)								
Site Features	Likely e	ly effect(s) of East Anglia ONE North												
	Collisio	y effect(s) of East Anglia ONE North sion mortality Displacement/Disturbance Barrier Effect Cumulative/In- combination												
	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 (see section 5.1 of Appendix 12.2 (APP-470) and migrations of birds from this SPA are likely to result in negligible numbers passing through the site during migration (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).







Site 129

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	bination
	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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).







Site Name of European Site:	130 NTP S	-H Wat	tenmee	r und an	grenzer	nde Kust	tengebie	ete SAC							
Distance to East Anglia ONE North (km)	419														
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
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 site is beyond that of potential for direct or indirect effects (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).







Site Name of European Site: Distance to East Anglia ONE North(km)	131 Ooste 109	erscheld	le SAC												
Site Features	_	effect(s water n	,	t Anglia Vessel	ONE No Interact		Indirec	t effects	on	Chang quality	es to wa	iter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of the proposed project and the extent of any impact on individuals from this site result are negligible and would result in no potential for LSE (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).







Site Name of E Distance t North (km	to East		ONE			Shingle S		AC										
Site Features		effect(s)			orary ph		Smoth increa suspe sedim	nded	ue to		obilisation minated ents	on of		water no	oise	In-con	nbinatior	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Coastal lagoons	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The primary feature of the SAC is a series of percolation lagoons which are separated from the marine environment by the Orford shingle beach. These features are described as non-marine as they occur landward of highest astronomical tide. Therefore, due to a physical barrier there is no pathway between the source of any effects in the marine environment and the receptor (see Table 5.2 of HRA Screening Report (APP-470).





Site	133												
Name of European Site:	Östliche D	eutsche	Bucht SF	PA									
Distance to East Anglia ONE North (km)	411												
Site Features	Likely e	ffect(s) of	East Ang	lia ONE N	North								
	Collision	n mortality	,	Displace	ement/Dis	turbance	Barrier l	Effect		Cumula	ative/In-co	mbination	
	С	0	D	С	0	D	С	0	D	С	0	D	
Ornithology													
Nonbreeding seabirds (razorbill, fulmar, black-throated diver, red-throated diver, herring gull, common gull, lesser black-backed gull, great black-backed gull, little gull, black-headed gull <i>Chroicocephalus ridibundus</i> , common scoter, great crested grebe, kittiwake, common tern, Arctic tern, sandwich tern, gannet, guillemot)		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)	
size of BDMPS regional popu b) The predicted effect attributal	n this SPA are likely to result in negligible numbers passing through East Anglia ONE North during migration relative to the all populations (see Table 8.2 of the HRA Screening Report (APP-044). ributable to East Anglia ONE North is so small that it would not significantly contribute to or alter the overall in-combination eatures at östliche Deutsche Bucht SPA (see Table 8.2 of the HRA Screening Report (APP-044). Likely effect(s) of East Anglia ONE North												
Site i eatures		ater noise		ssel Intera		Indirect of	effects on	C	hanges to quality		In-co	mbination	







Site	133														
Name of European Site:	Östliche	Deutsc	he Buc	ht SPA											
Distance to East Anglia ONE North (km)	411														
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Marine Mammals	·														
Harbour porpoise <i>Phocoena</i> phocoena	N(c)	N(c)	N(c)				N(c)	N(c)	N(c)	N(c)		N(c)	N(c)	N(c)	N(c)
Grey seal Halichoerus grypus	N(c)	N(c)	N(c)				N(c)	N(c)	N(c)	N(c)		N(c)	N(c)	N(c)	N(c)
Harbour seal Phoca vitulina	N(c)	N(c)	N(c)				N(c)	N(c)	N(c)	N(c)		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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).







Site Name of European Site: Distance to East Anglia ONE North (km)	134 Ouess 675	sant-Mo	lene S <i>A</i>	/C											
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 C	0	D	quality C	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 (see paragraphs 189 and 190 and Table 8.2 of the HRA Screening Report (APP-044)).

5.3.2 Information to Support AA – Screening Matrices





Site	135											
Name of European Site:	Outer Tha	nes Estua	ry SPA									
Distance to East Anglia ONE North (km)	Within cak	le corrido	r									
Site Features	Likely	effect(s) of	East Ang	glia ONE N	orth							
	Collisi	on mortality	′	Displac	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-cor	mbination
	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 tern		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, collision risk cannot be ruled out at this stage and further assessment is required (see Table 8.2 of the HRA Screening Report (APP-044).
- b) Given the overlap of the East Anglia ONE North cable corridor with this SPA, 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 the Project will make little difference to the existing baseline and therefore the potential for LSE is considered to be negligible. (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Appendix 12.1 (APP-469)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





Site 136

Name of European Site Panache De La Gironde Et Plateau Rocheux De Cordouan (Système Pertuis Gironde) SAC

Distance to East Anglia ONE 1,050km (offshore cable corridor)

North (km)

Marine Mammals															
Site Features	Likely ef	fect(s) of I	East Angl	ia ONE N	lorth										
	Underwa	ater noise		Vessel	Interaction	ons	Indirect	effects or	prey	Change	es to wate	er	In-com	bination	
										quality					
	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
Phocoena phocoena															(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
Halichoerus grypus															(a)

Fish

Site	Likely	effect(s)	of East	Anglia C	NE No	orth															
Features	Perma loss	nent ha	bitat	Tempo physica disturb	al						nobilisat minated ents			water r bration			romagn (EMF)		In-cor	mbinati	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Atlantic sturgeon	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)						







Site				13	36																
Name of	Europe	an Site		Pa	anach	e De La	a Giron	de Et I	Plateau	ı Roch	eux De	Cordo	uan (Sy	/stème	Pertuis	s Giror	nde) S	AC			
Distance North (kr		Anglia	ONE	1,	050km	(offsh	ore ca	ble co	rridor)												
Allis shad	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	(b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
Twaite shad	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b
Lamper n	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
Great 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
Salmon	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	(b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b
Benthic I	Habitats	,					1	1	1	1	1				1		1				
Site	Likely	effect(s)	of East	Anglia C	ONE N	orth															
Features				Perma	nent lo	oss	phys	porary ical rbance		incre	ended	due to		nobilisa aminate nents			erwater vibratio		In-co	mbinat	ion
				С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D







Site	13	6																
Name of European Site	Pa	anache	De La	a Giron	de Et I	Plateau	ı Roch	eux De	Cordo	uan (Sy	/stème	Pertui	s Giror	nde) S	AC			
Distance to East Anglia ONE North (km)	1,0	050km	(offsh	ore ca	ble co	rridor)												
Sandbanks which are slightly covered by sea water all the time	N (b)	N (b)	N (b)															
Estuaries	N (b)	N (b)	N (b)															
Mudflats and sandflats not covered by seawater at low tide	N (b)	N (b)	N (b)															
Reefs	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	(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 (see paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044))

b) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) and Appendix 10.1 (APP-462) that transboundary impacts on fish and benthic habitats would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA

Breeding Arctic tern

Breeding ringed plover





Site 137 Name of European Site: Papa Stour SPA **Distance to East Anglia ONE** 910 North (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 С 0 D С 0 D D С 0 D

N (a)

N (b)

N (c)

N (b)

N (c)

N (b)

N (c)

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 (see Table 8.2 of the HRA Screening Report (APP-044).

N (a)

N (b)

N (a)

N (b)

- 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





Site 138

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

Distance to East Anglia ONE

North (km)

835

North (Kill)												
Site Features	Likely eff	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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).







Site Name of European Site: Distance to East Anglia ONE North (km)	139 Pater 846	Noster-	skärgåı	rden SA	С										
Site Features	Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indirect prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour 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 (see paragraphs 218 and 219 and Table 8.2 of the HRA Screening Report (APP-044)).





140 Site

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

Distance to East Anglia ONE 769

North (km)

Site Features	Likely ef	fect(s) of I	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dis	turbance	Barrier E	ffect		Cumulat	ive/In-com	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding Arctic tern		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (b)	N (b)	N (b)

- a) Pentland Firth Islands SPA is beyond maximum foraging range of Arctic tern so has no breeding season connectivity. The proportion of the population migrating through the East Anglia ONE North site is likely to be extremely small relative to BDMPS (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).

Site		14	1												
Name of Europea	n Site	Pe	rtuis Cha	rentais S	SAC										
Distance to East A	Anglia ONE	974	4km (offs	hore cal	ole corri	dor)									
Marine Mammals															
Site Features	Likely eff	ect(s) of E	East Angli	a ONE N	lorth										
	Underwa	ter noise		Vessel	Interaction	ons	Indirect	effects on	prey	Change quality	es to wate	er	In-com	oination	
	С	0	D	С	0	D	С	0	D	Ċ	0	D	С	0	D







Site				14	1																
Name of I	Europea	an Site	;	Pe	ertuis (Charen	tais S	AC													
Distance North (km		Anglia	a ONE	97	4km (d	offsho	re cabl	e corri	dor)												
Harbour p Phocoena	orpoise		N (a)	N (a)	N (a) N	(a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a	a)		N (a)	N (a)	N (N (a)
Grey seal Halichoer			N (a)	N (a)	N (a) N	(a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a	a)		N (a)	N (a)	N (' '	N (a)
Fish																					
Site	Likely	effect(s) of East	Anglia C	NE No	rth															
Features	Perma loss	nent h	nabitat	Tempo physic disturb	al		to inc	thering creased ended nent		_	minate	ation of		rwater ibratior			tromagn s (EMF)	etic	In-co	mbinat	ion
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Atlantic sturgeon	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)	(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
Allis shad	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b
Twaite shad	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b



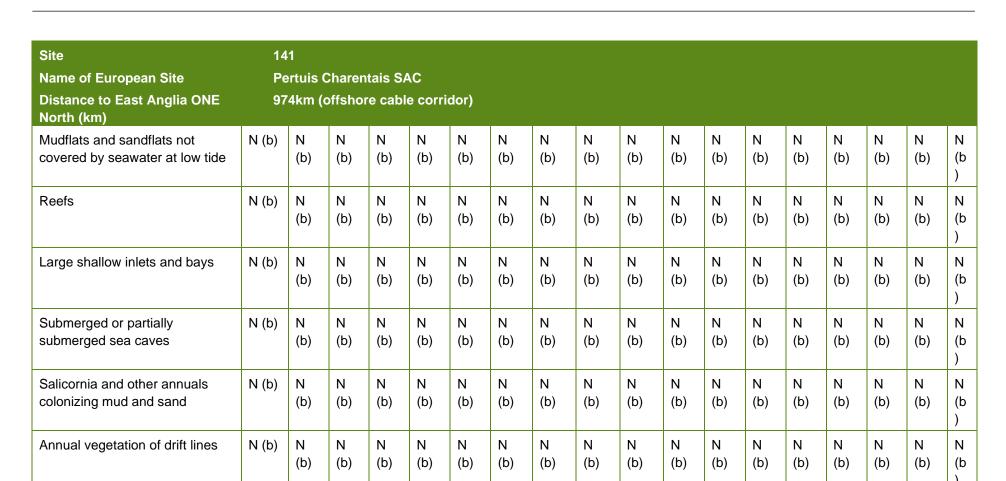




Site				14	1																
Name of	Europea	an Site		Pe	ertuis (Charen	itais S	AC													
Distance North (kr		Anglia	ONE	97	'4km (offsho	re cabl	e corri	dor)												
Lamper n	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	(b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)
Great 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
Salmon	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
Benthic I	Habitats	•	1															1			
Site Features	Likely	effect(s)	of East	Anglia C	ONE N	orth															
reatures				Perma	nent lo	oss	phys	oorary ical rbance		incre	ended	due to		nobilisa minate nents			erwater vibration		In-co	mbinati	on
				С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanl covered b 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)	(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)	N (b)	N (b)











Site 141

Name of European Site Pertuis Charentais SAC

Distance to East Anglia ONE 974km (offshore cable corridor)

North (km)

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 (see paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).

b) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) and Appendix 10.1 (APP-462) that transboundary impacts on fish and benthic habitats would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA

Site 142

Name of European Site Plymouth Sound and Estuaries SAC

Distance to East Anglia ONE North 443km (shortest distance overland)

(km)

Fish

Site	Likely	effect(s) of Ea	ast Angl	lia ONE	North															
Features	Perm loss	anent h	nabitat	Temp physic distur	•		Smoth increa suspe sedim	ended	due to	_	nobilisat 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
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)

Benthic Habitats







Site		1	42																
Name of	European Site	P	lymou	th Sou	nd and	l Estua	ries S	AC											
Distance (km)	to East Anglia ONE No	rth 4	43km (shorte	est dist	ance o	verlan	d)											
Site Features	Likely effect(s) of East	Anglia	ONE N	orth															
1 Gataros		Perm	anent l	oss	physi	oorary cal bance		increa	ended	due to		nobilisa ntamina nents			rwater ibratior		In-cor	mbinati	on
		С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
	s which are slightly y 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)
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)	N (b)	N (b)
Large sha	illow inlets and bays	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)
Reefs		N (b)	N N N N N N N N N N N									N (b)	N (b)	N (b)	N (b)				
Atlantic sa	alt meadows	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see section 6.2.1, of the HRA Screening Report (APP-044)).

b) The distance between the offshore project area and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).







Site	143											
Name of European Site:	Portsmouth	Harbour	SPA									
Distance to East Anglia ONE North (km)	286 (windfa	rm site) a	nd 238 (of	fshore ca	able corri	dor)						
Site Features	Likely e	ffect(s) of	East Angli	a ONE No	orth							
	Collision	n 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
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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).







Site	144														
Name of European Site:	Presq	u'ile De	Crozor	SAC											
Distance to East Anglia ONE North (km)	704														
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interact	ions	Indirect prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
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 (see paragraphs 189 and 190 and Table 8.2 of the HRA Screening Report (APP-044)).





RENEWABLES

Site 145

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

Site Features	Likely e	ffect(s) of	East Angli	ia ONE N	orth							
	Collision	n mortality		Displac	ement/Dis	sturbance	Barrier	Effect		Cumula	ative/In-co	mbinatio
	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

lapwing



145



Name of European Site: Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA **Distance to East Anglia ONE** 419 North (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination С 0 С С С D 0 D 0 D 0 D Kentish plover Charadrius alexandrinus, Bewick's swan, whooper swan, snipe Gallinago gallinago, oystercatcher, black-winged stilt

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 (see Table 8.2 of the HRA Screening Report (APP-044).

N (d)

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

Himantopus himantopus, bar-tailed godwit, black-tailed godwit, common scoter, red-breasted merganser,

Terrestrial birds (various species)

curlew, whimbrel, ruff, spoonbill, golden plover, grey plover, red-necked grebe Podiceps grisegena, black-necked grebe Podiceps nigricollis, avocet, eider, shelduck, greenshank, redshank,

N (d)







Site 145 Name of European Site: Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA **Distance to East Anglia ONE** 419 North (km) Site Features Likely effect(s) of East Anglia ONE North Collision mortality Displacement/Disturbance **Barrier Effect** Cumulative/In-combination 0 D 0 D С 0 D 0 predominantly along the continental coast of the North Sea towards northern breeding grounds rather than across the southern North Sea (see Table 8.2 of the HRA Screening Report (APP-044). c) Survey data show little or no evidence of these waterbird features occurring in the East Anglia ONE North OWF site (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site, as most of these birds are likely to remain on the continental side of the North Sea (see Table 8.2 of the HRA Screening Report (APP-044). d) Terrestrial birds from this SPA are very unlikely to migrate to the UK; those that do migrate are more likely to follow the west European flyway along the continental coast (see Table 8.2 of the HRA Screening Report (APP-044). 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 this SPA (see Table 8.2 of the HRA Screening Report (APP-044).







Site	146														
Name of European Site:	Récifs	et mar	ais arri	ère-littor	aux du (Cap Lév	i à la Po	inte de S	Saire S <i>F</i>	C					
Distance to East Anglia ONE North (km)	385														
Site Features	Likely	effect(s)	of Eas	t Anglia (ONE Noi	rth									
	Under	water no	oise	Vessel	Interacti	ons	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
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 (see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal, of the HRA Screening Report (APP-044)).





Site 147

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

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

North (km)

Marine Mammals

Site Features	Likely	effect(s) of Eas	t Anglia	ONE N	orth									
	Under	water n	oise	Vesse	l Interac	ctions	Indired prey	t effects	s on	Chang quality	es to w	ater	In-com	nbination	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> 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	Perma	nent los	SS	Tempo disturb	orary phy ance	ysical	increas	ering du sed nded se			obilisatio ninate d ents		Undervand vil	water no oration	oise	In-com	binatior	1
	С	O D C			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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).

5.3.2 Information to Support AA – Screening Matrices



Site 147

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

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

North (km)

b) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458)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 148

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

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

North (km)

	ine		

Likely	effect(s) of Eas	t Anglia	ONE N	orth									
Under	water n	oise	Vesse	l Interac	ctions	Indired prey	t effects	s on			ater	In-con	nbinatio	n
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)
	Under C N(a) N(a)	Underwater n C O N(a) N(a) N(a) N(a)	Underwater noise C O D N(a) N(a) N(a) N(a) N(a)	Underwater noise Vesse C O D C N(a) N(a) N(a) N(a) N(a) N(a) N(a)	Underwater noise C O D C N(a) N(a) N(a) N(a) N(b) N(a) N(a)	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)	Underwater noise Vessel Interactions Indirectors C O D C N(a) N(a)	Underwater noise Vessel Interactions Indirect effects prey C O D C O N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(b) N(a) N(a)	Underwater noise Vessel Interactions Indirect effects on prey C O D C O D C O D N(a) N(a) <td>Underwater noise Vessel Interactions Indirect effects on quality C O D C N(a) N(b) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(b) N(a) N(b) N(a) N(b) N(b) N(c) N(c)</td> <td>Underwater noise Vessel Interactions Indirect effects on prey C O D C O D C O N(a) N(a)</td> <td>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)</td> <td>Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-congression C O D N(a) N(a)</td> <td>Underwater noise Vessel Interactions Indirect effects on quality C O D C O D C O D C O D C O N(a) N(b) N(a) N(a) N(a) N(b) N(a) N(b) N(a) N(b) N(b) N(c) N(c)</td>	Underwater noise Vessel Interactions Indirect effects on quality C O D C N(a) N(b) N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(b) N(a) N(b) N(a) N(b) N(b) N(c) N(c)	Underwater noise Vessel Interactions Indirect effects on prey C O D C O D C O N(a) N(a)	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)	Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-congression C O D N(a) N(a)	Underwater noise Vessel Interactions Indirect effects on quality C O D C O D C O D C O D C O N(a) N(b) N(a) N(a) N(a) N(b) N(a) N(b) N(a) N(b) N(b) N(c) N(c)

Benthic Habitats

Site Features	Perma	inent los	SS	Tempo	orary ph	ysical	increa	ering du sed nded se			obilisation ninate d		Under	water no	oise	In-com	bination	1
	С	O D C		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)





Site 148

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)

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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).

b) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458)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 149

Name of European Site River Avon SAC

Distance to East Anglia ONE North 250km (shortest distance overland)

(km)

	ı	_	L	
_	ı	S	n	
	•	J		

Site	Likely	effect(s) of Ea	st Angl	lia ONE	North															
Features	Perma	anent h	nabitat	Temp physic distur	cal		Smoth increa suspe sedim	nded	due to		nobilisa ntamina nents			rwater i ibration			omagn (EMF)		In-cor	mbinatio	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)
Salmon	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)





Site 149

Name of European Site **River Avon SAC**

Distance to East Anglia ONE North 250km (shortest distance overland)

(km)

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 (see section 6.2.1, of the HRA Screening Report (APP-044)).

N (a) N (a)





N (a) N (a) N (a)

N (a) N (a)



Site 150 **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) N (a)

River lamprey

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 (see Table 5.2 of the HRA Screening Report (APP-470)).

5.3.2 Information to Support AA – Screening Matrices



Site 151

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

Distance to East Anglia ONE North 926

(km)

Site Features	Likely e	ffect(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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044)).



С



Site 152 Name of European Site: **Rousay SPA Distance to East Anglia ONE** 818 North (km) Likely effect(s) of East Anglia ONE North Site Features Cumulative/In-combination Collision mortality Displacement/Disturbance **Barrier Effect**

С

N (a)

D

0

N (a)

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

0

N (a)

С

N (a)

0

N (a)

D

N (a)

С

N (b)

0

N (b)

D

N (b)

D

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 Rousay SPA (see Table 8.2 of the HRA Screening Report (APP-044)).

Breeding seabird assemblage including

as named features guillemot, Arctic skua, Arctic tern, kittiwake, fulmar







Site	153														
Name of European Site:	Sälöfj	orden S	AC												
Distance to East Anglia ONE North (km)	850														
Site Features	Likely	effect(s)	of Eas	t Anglia (ONE Noi	rth									
	Under	water no	oise	Vessel	Interacti	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 potential impact range of East Anglia ONE North and the site is beyond that of potential for direct or indirect effects (see paragraphs 218 and 219 and Table 8.2 of the HRA Screening Report (APP-044)).







Site Name of European Site: Distance to East Anglia ONE North (km)	154 Sanda 814	y SAC													
Site Features	Likely	effect(s) of Eas	t Anglia (
	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
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
a) The distance between the potential for LSE (see part).	•	•	•		•				•		dividuals	s from thi	s site wo	ould resu	lt in no

Site	155														
Name of European Site:	Sandb	anker ı	ud for T	horsmin	ide SAC										
Distance to East Anglia ONE North (km)	557km	1													
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
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 (see paragraphs 167 and 168 and Table 7.3 of the HRA Screening Report (APP-044)).





Site 156 Name of European Site: Sandbanker ud for Thyboron SAC **Distance to East Anglia ONE** 589km North (km) Likely effect(s) of East Anglia ONE North Site Features Indirect effects on Changes to water Underwater noise **Vessel Interactions** In-combination quality prey С С С 0 D С 0 D 0 D 0 D C 0 D Harbour Porpoise Phocoena N(a) phocoena

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 (see paragraphs 167 and 168 and Table 7.3 of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North(km)	157 Sandlings Within on		ole corri	dor					
Site Features	Habitat Los	ss		a ONE North Displacement/	1	1	In combina		
	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)
Breeding woodlark <i>Lullula</i> arborea	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 (see Table 4.2 of the HRA Screening Report (APP-470).





Site	158														
Name of European Site:	SBZ 1	/ ZPS 1	SAC												
Distance to East Anglia ONE North (km)	121														
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 <i>Phoca vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	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 (see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for harbour porpoise, of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North (km)	159 SBZ 2 110	/ ZPS 2	SAC												
Site Features	Likely	effect(s)	of Eas	t Anglia	ONE No	rth									
	Under	water no	oise	Vessel	Interacti	ons	Indirec	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
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 159

SBZ 2 / ZPS 2 SAC Name of European Site:

Distance to East Anglia ONE

110

North (km)

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 (see paragraphs 189 and 190 and Table 8.2 of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North (km)	160 SBZ 3 111	/ ZPS 3	SAC												
Site Features				t Anglia											
	Under	water no	oise	Vessel	Interact	ions		t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	prey C	0	D	C	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 (see paragraphs 189 and 190 and Table 8.2 of the HRA Screening Report (APP-044)).





Site 161 Name of European Site: **Scanner Pockmark SAC Distance to East Anglia ONE** 657 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 increased and vibration contaminated suspended sediments sediment 0 С 0 С С 0 С 0 С 0 С D D 0 D D D D N (a) Submarine structures made by leaking gases

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044)

Site		16	52												
Name of Europea	an Site	So	chleswig	Holsteini	sches El	bastuar	und angr	enzende	Flachen S	SAC					
Distance to East North (km)	Anglia ONE	44	5km												
Marine Mammals	•														
Site Features	Likely e	ffect(s) of	East Ang	lia ONE N	North										
	Underw	ater noise		Vessel	Interaction	ons	Indirect	effects or	n prey	Chang quality	es to wa	ter	In-con	nbination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D





Site 162 Name of European Site SchleswigHolsteinisches Elbastuar und angrenzende Flachen SAC **Distance to East Anglia ONE** 445km North (km) N (a) Harbour seal Ν Phoca vitulina (a) **Fish** Site Likely effect(s) of East Anglia ONE North **Features** Temporary Smothering due to Electromagnetic Permanent Re-mobilisation Underwater noise In-combination habitat loss physical increased of contaminated fields (EMF) and vibration disturbance suspended sediments sediment 0 С С 0 D С 0 D С D С 0 D С 0 D С 0 D 0 D Houting Ν (b) Twaite Ν shad (b) Lampern Ν (b) Great sea Ν lamprey (b) Salmon Ν (b) **Benthic Habitats** Likely effect(s) of East Anglia ONE North





	uropean Site o East Anglia ONE	5	62 Schlesv 45km	vigHol	steinis	ches E	Ibastu	ar und	angrer	nzende	Flache	en SAC	;						
Site Features		Perm	anent l	oss	Temp physi distur			increa	ended	due to		nobilisa ntamina nents			rwater ibratior		In-cor	mbinati	on
		С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
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)	N (b)	N (b)
	nd sandflats not 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)
Large shall	ow inlets and bays	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)
	and other annuals mud and sand	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)
	meadows (Glauco- alia maritimae)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraphs 218 and 219, of the HRA Screening Report (APP-044)).

b) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458) and Appendix 10.1 (APP-462) that transboundary impacts on fish and benthic habitats would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA

5.3.2 Information to Support AA – Screening Matrices



Site 163

Name of European Site: Seevogelschutzgebiet Helgoland SPA

Distance to East Anglia ONE

North (km)

405

Site Features	Likely eff	fect(s) of E	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 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site 163

> 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 (see Table 8.2 of the HRA Screening Report (APP-044)).

Site 164

Name of European Site **Severn Estuary SAC**

Distance to East Anglia ONE North 278km (shortest distance overland)

(km)

Fish

Site	Likely	effect(s) of Ea	st Ang	lia ONE	North															
Features	Perma	anent h	nabitat	Temp physic distur	-		Smoth increa suspe sedim	ended	due to		nobilisa ntamina nents			rwater i ibration			omagn (EMF)	etic	In-cor	nbinatio	n
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sea	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Lamprey	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
River	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
lamprey	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Twaite shad	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)

Benthic Habitats

Likely effect(s) of East Anglia ONE North







	ıropean Site East Anglia ONE No	5	64 Severn 278km (overlan	nd)											
Site Features		Perm	anent l	oss	physi	oorary cal bance		incre	ended	due to		nobilisa ntamina nents			rwater ibratior		In-co	mbinati	on
		С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
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)	N (b)	N (b)
	d sandflats not 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)
Atlantic salt	meadows	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)

- a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see section 6.2.1, of the HRA Screening Report (APP-044)).
- b) The distance between the offshore project area and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044).







Site	165														
Name of European Site:	Skage	ns Gre	n og Sk	agerrak	SAC										
Distance to East Anglia ONE North (km)	754														
Site Features	Likely	v effect(s) of East Anglia ONE North													
	Under	nderwater noise Vessel Interactions Indirect effects on prey Changes to water quality													
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

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 (see paragraphs 167 and 168, of the HRA Screening Report (APP-044)).





Site 166

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 N	orth							
	Collision	mortality		Displac	ement/Dis	turbance	Barrier I	Effect		Cumula	tive/In-cor	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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this site are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site	167														
Name of European Site:	Sotes	kär SAC													
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)

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 (see paragraphs 218 and 219 of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North (km)			rth Sea dor and	SAC d windfa	rm site)										
Site Features		effect(s water no		t Anglia (Vessel	ONE No Interact		Indired	t effects	on	Change	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	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 (see paragraphs 167 and 168, of the HRA Screening Report (APP-044)).





Site 169

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 Angli	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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site Name of European Site: Distance to East Anglia ONE North (km)	170 Staverton Park and the Th 6 (onshore cable corridor		
Site Features	Likely effect(s) of East Angl Habitat Loss	ia ONE North O	D
Old acidophilous oak woods with <i>Euercus robur</i> on sandy plains	N(a)	N(a)	N(a)

a) No overlap therefore no direct effect and beyond the range of potential significant indirect effect (see Table 3.2 of the HRA Screening Report (APP-470).







Site	171														
Name of European Site:	Steing	rund S	AC												
Distance to East Anglia ONE North (km)	411														
Site Features	Likely	effect(s) of Eas	t Anglia (ONE No	rth									
	Under	water no	oise	Vessel	Interacti	ions	Indirec prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia ONE North and the site is beyond that of potential for direct or indirect effects (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).







Site	172														
Name of European Site:	Store	Rev SC	l l												
Distance to East Anglia ONE North (km)	720														
Site Features	Likely	ely effect(s) of East Anglia ONE North													
	Under	water no	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour 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 site is beyond that of potential for direct or indirect effects (see paragraphs 167 and 168, of the HRA Screening Report (APP-044)).





Site 173

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	ement/Dist	urbance	Barrier E	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 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 (see section 5.1 of Appendix 12.2 (APP-470)., 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 site (see section 5.1 of Appendix 12.2 (APP-470)., and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site	174														
Name of European Site:	Stranc	lenge p	å Læsø	og hav	et syd h	erfor SA	C								
Distance to East Anglia ONE North (km)	850														
Site Features	Likely	tely effect(s) of East Anglia ONE North													
	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
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 (see paragraphs 218 and 219 for harbour seal and paragraphs 189 and 190 for grey seal, of the HRA Screening Report (APP-044)).





Site 175 Name of European Site: **Sumburgh Head SPA Distance to East Anglia ONE** 855 North (km) Likely effect(s) of East Anglia ONE North Site Features Displacement/Disturbance Collision mortality **Barrier Effect** Cumulative/In-combination С 0 D 0 D С 0 D С С 0 D Breeding seabird assemblage including N (a) N (a) N (a) N (a) N (b) N (b) N (a) N (a) N (a) N (b) as named features kittiwake, fulmar,

- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).

Applicable to East Anglia ONE North

guillemot, Arctic tern







Site 176

Sydlige Nordsø SAC Name of European Site:

Distance to East Anglia ONE 431

North (km)															
Site Features	Likely	effect(s	of Eas	t Anglia	ONE Noi	th									
	Under	water no	oise	Vessel	Interacti	ons	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
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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).







Site				177													
Name of I	European Site:			Sylter A	ußenriff S	CI											
Distance	to East Anglia ONE	North (km)	478 (win	dfarm site) and 49	7 (offsh	ore ca	able co	orrid	or)						
Ornitholo	рду																
Site Featu	ıres		Likely	effect(s)	of East An	glia ONE	North										
			Collisi	on mortal	ity	Displac	cement/D	Disturb	ance	Ва	arrier Ef	ect		Cumu	lative/Ir	n-comb	ination
			С	0	D	С	0)	С		0	D	С	0		D
including throated do black-backed gukittiwake,	ing seabird assemblag black-throated diver, re liver, common gull, les ked gull, great black- ull, little gull, gannet, common tern, Arctic te tern, guillemot	ed- ser		N (a)		N (a)	N (a)	١	l (a)	N	(a)	N (a)	N (a)	N (b)	N (t	0)	N (b)
Marine m														1			
Site Featu	ıres	Like	ly effec	t(s) of Ea	st Anglia C	NE Nort	:h										
		Und	lerwate	r noise	Vessel	Interacti	ons	Indii	ect eff	ects	on prey	Chang	ges to wate	er	In-cor	nbinatio	on
		С	0	D	С	0	D	С	0		D	C	0	D	С	0	D
Harbour p	orpoise <i>Phocoena</i>	N (c) N (c)	N (c)	N (c)	N (c)	N (c)	N (c) N	(c)	N (c)	N (c)		N (c)	N (c)	(c)	N (c)
Grey seal	Halichoerus grypus	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)
Harbour s	larbour seal <i>Phoca vitulina</i> N			N (c)	N (c)	N (c)	N (c)	N (c) N	(c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
Fish				,		,	<u>'</u>										·
Site	Likely effect(s) of East	st Angl	ia ONE	North													
Features	Permanent habitat loss	Temp physic disturi	cal	ir s	mothering creased uspended ediment	due to	Re- mol contami sedimer	nated	-		derwate d vibratio		Electrom fields (EM	-	In	-combi	nation







Site						177															
Name of	Europe	ean Sit	e:			Sylte	r Auße	nriff S	CI												
Distance				North	(km)	478 (\	windfa	rm site) and 4	97 (off:	shore c	able c	orridor)							
	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. (see Table 8.2 of the HRA Screening Report (APP-044))
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- c) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 10.1 (APP-462) 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:	Teesmouth	and Cleve	eland Coa	st SPA ar	nd Ramsa	ır									
Distance to East Anglia ONE North (km)	331 (windfa	rm site) a	nd 322 (of	fshore ca	able corrid	dor)									
Site Features	Likely e	Likely effect(s) of East Anglia ONE North													
	Collisio	ely effect(s) of East Anglia ONE North Displacement/Disturbance Barrier 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044).





Site 179 Name of European Site: Thames Estuary and Marshes SPA and Ramsar **Distance to East Anglia ONE** 99 (windfarm site) 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 С С 0 0 D 0 D D Wintering and passage waterbird N (a) N (c) N (c) N (c) assemblage including as named features dunlin, knot, ringed plover, black-tailed godwit, grey plover, avocet, redshank Nonbreeding hen harrier N (b) N (b) N (b) N (b) N (b) N (b) N (c) N (b) 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site. (see Table 8.2 of the HRA Screening Report (APP-044).
- b) Survey data show no evidence of hen harrier occurring in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), 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. (see Table 8.2 of the HRA Screening Report (APP-044).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044).





Site 180 Name of European Site: **Thanet Coast and Sandwich Bay SPA and Ramsar Distance to East Anglia ONE** 118 (windfarm site) and 88 (offshore cable corridor) 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 С С 0 0 D 0 D D Nonbreeding turnstone, golden plover N (a) N (a) N (a) N (a) N (a) N (a) N (c) N (c) N (a) N (c) N (b) Breeding little tern 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 (see section 5.1 of Appendix 12.2 (APP-470), 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. (see Table 8.2 of the HRA Screening Report (APP-044).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044).





Site Name of Eu Distance to North (km)			ΙE		t Coast s		ridor)											
Site Features		effect(s) anent los	of East /	_	orary ph		Smoth increa suspe	nded	ue to	_	obilisation minated ents	on of		rwater no	oise	In-con	nbinatior	1
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Mudflats and sandflats not covered by seawater at low tide	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Reefs	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)		N (a)	N (a)	N (a)	N (a)

a) The distance between the offshore project area and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044)







Site	182													
Name of European Site:	The S	Swale SPA 8	& Ram	sar										
Distance to East Anglia ONE North (km)	140 (windfarm si	te) an	d 98 (offshore ca	ıble corric	ior)								
Site Features	Like	ikely effect(s) of East Anglia ONE North												
	Colli	ikely effect(s) of East Anglia ONE North collision mortality Displacement/Disturbance Barrier Effect Cumulative/In- combination												
	С	0	D	С	0	D	С	0	D	С	0	D		
Wintering and passage waterbird assemblage including as named features 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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this site are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





RENEWABLES

Site Name of Europea Distance to East (km) Marine Mammals	Anglia Of		105	e Wash 5 (windf	and North														
Site Features		fect(s) of E	ast Ang	Vesse	I Interaction		Indire	ct effe	ects on	prey	Change	s to wate	er quali	ty In	-com	binatio	n		
	С	0	D	С	0	D	С		0	D	С	0	D	C			D		
Harbour seal Phoca vitulina	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)		
Grey seal Halichoerus grypus	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)		
Benthic Habitats																			
Site Features	Permane	ent loss		Tempo	orary phys oance	ical		sed s	due to uspend		Re- mot contami sedimer		of	Und nois vibra			In-co	ombin	ation
	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)	(b)	N (b)		N (b)		(b)	N (b)		N (b)	N (b)	N (b)	(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)		(b)	N (b)		N (b)	N (b)	N (b)	(b)
Large shallow inlets and bays	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)		N (b)		(b)	N (b)		N (b)	N (b)	N (b)	N (b)

5.3.2 Information to Support AA – Screening Matrices



Site 183

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 (see Table 7.2 of the HRA Screening Report (APP-044).
- b) The distance between East Anglia ONE North and the designated site is beyond the range of any potential LSE. Indirect far-field effects are limited to 1km of the works and for the duration of 1 tidal cycle (see paragraph 118 of APP-044)





Site	184											
Name of European Site:	The Wash	SPA and	Ramsar									
Distance to East Anglia ONE North (km)	192 (winds	farm site)	and 104 (offshore)	cable cor	ridor)						
Site Features	Likely e	ffect(s) of	East Angl	ia ONE N	orth							
	Collision	n mortality	′	Displac	ement/Dis	turbance	Barrier	Effect		Cumula	tive/In-co	mbination
	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 (see section 5.1 of Appendix 12.2 (APP-470)., and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site) (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).







Site	185														
Name of European Site:	Thybo	ron Ste	envolde	SCI											
Distance to East Anglia ONE North (km)	572km														
Site Features		effect(s vater no		t Anglia (Vessel	ONE No Interact		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 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 (see paragraphs 167 and 168 and Table 7.3 of the HRA Screening Report (APP-044)).

Site Name of European Site: Distance to East Anglia ONE North (km)	186 Trego 556	r Goëlo	SAC												
Site Features		effect(s water no	-	t Anglia (Vessel	ONE No		Indirec	t effects	on	Change	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 (see paragraphs 189 and 190 and Table 8.2 of the HRA Screening Report (APP-044)).





0

N (b)

N (b)

D

N (b)

Site 187 Name of European Site: Troup, Pennan and Lion's Heads SPA **Distance to East Anglia ONE** 650 North (km) Likely effect(s) of East Anglia ONE North Site Features Displacement/Disturbance Collision mortality **Barrier Effect** Cumulative/In-combination

С

N (a)

D

0

N (a)

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 (see Table 8.2 of the HRA Screening Report (APP-044)).

0

N (a)

С

N (a)

0

N (a)

D

N (a)

D

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 Troup, Pennan & Lion's Heads SPA (see Table 8.2 of the HRA Screening Report (APP-044)).

Site 188

Breeding seabird assemblage including

as named features razorbill, fulmar, guillemot, kittiwake, herring gull

Name of European Site Unterelbe SCI

Distance to East Anglia ONE North 445km

(km)

Fish

Likely effect(s) of East Anglia ONE North





Site 188

Name of European Site **Unterelbe SCI**

Distance to East Anglia ONE North 445km

(KIII)																					
Site Features	Perm	anent h	nabitat	physi	oorary cal bance		increa	ended	due to		nobilisa ntamina nents			rwater ribratior			romagn (EMF)		In-cor	mbinatio	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Houting	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Twaite shad	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Lampern	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Great sea	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
lamprey	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Salmon	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)

a) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 10.1 (APP-462) that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA







Site	189														
Name of European Site:	Untere	ms und	d Außer	nems SC	CI										
Distance to East Anglia ONE North (km)	320														
Site Features	Likely	effect(s)	of East	Anglia (ONE No	rth									
	Under	vater no	oise	Vessel	Interacti	ions	Indirect prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour 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 (see paragraphs 189 and 190 and Table 8.2 of the HRA Screening Report (APP-044)).





Site	190															
Name of European Site:	Vadeh	avet m	ed Ribe	Å, Tvec	l Å og V	arde Å v	est for '	Varde S	AC							
Distance to East Anglia ONE North (km)	477															
Site Features	Likely	effect(s) of Eas	t Anglia	ONE No	rth										
	Under	derwater noise Vessel Interactions Indirect effects on quality In-combination														
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Harbour porpoise <i>Phocoena</i> phocoena	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
Grey seal Halichoerus grypus	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	

a) The distance between the potential impact range of East Anglia ONE North and the site is beyond that of potential for direct or indirect effects (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).







Site	191														
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 no	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change quality	es to wa	ter	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour seal Phoca vitulina	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)

a) The distance between the potential impact range of East Anglia ONE North and the site is beyond that of potential for direct or indirect effects (see paragraphs 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).





Site 192

Name of European Site: **Vlaamse Banken SAC**

Distance to East Anglia ONE 86 (windfarm site) and 89 (offshore cable corridor)

North (km)

Marine Mammals

Site Features	Likely	effect(s) of Ea	ast Anglia	ONE Nort	h									
	Under	water	noise		Interactions ance at sea		Indirec	t effects on	prey	Char	nges to water	quality	In-combina	tion	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise Phocoena phocoena	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)		N (a)	N (a)	N (a)	N (a)
Grey seal Halichoerus grypus	Y (d)	Y (d)	Y (d)	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 e	ffect(s)	of Eas	st Angl	ia ONE	North	ı														
Feature s	Perman loss	ent ha	bitat	physi	oorary cal bance		Smother increase susper sedime	sed nded	ue to		nobilisa ntamin nents		Underwa		se		romagne (EMF)	tic	In-co	mbinat	ion
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D





Site				19	92																
Name of I	Europea	n Site:		V	laamse	e Bank	en SAC														
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)
Twaite Shad	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)	N(b)
Benthic h	nabitats						1						1								

Site Features	Perm	nanent I	oss	phys	nporar sical urband			ering due to sed suspen ent		cont	mobili amina ments			erwat vibra	er noise tion	In- comb	oinatic	on
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Reefs	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)
Sandbanks which are slightly covered by sea water all the time	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)	N(c)

- 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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).
- 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 and Evidence Plan Process (EPP) Appendix 10.1 (APP-462) 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 (see Table 7.3 of the HRA Screening Report (APP-044)).





Site 193

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)

Marine Mammals

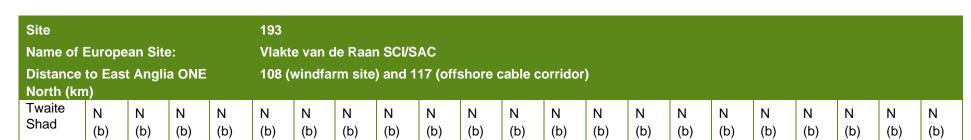
Site Features	Likely 6	effect(s) c	of East Ar	nglia ONE	North										
	Underv	vater nois	e	Vessel	Interaction	ns	Indirect	effects o	n prey	Change	s to wate	r quality	In-comb	ination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise Phocoena phocoena	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (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	Perma	anent h	nabitat	Temp physic disturb	cal		Smoth increa suspe sedim	nded	due to		obilisat Itamina ents			rwater i ibration			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
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)







- 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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).
- b) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 10.1 (APP-462) that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA.





Site 194 Name of European Site Voordelta SAC and SPA

Distance to East Anglia ONE 93 (windfarm site) and 107 (offshore cable corridor)

North (km)

Site Features	Likely effect(s) of East Angli	ia ONE N	lorth										
		Collisio	n mortali	ty	Displace	ement/Dis	turbance	Barrier	Effect		Cumula combina		
		С	0	D	С	0	D	С	0	D	С	0	D
breasted merganser, p bar-tailed godwit, oyste	nged plover, dunlin, little gull, eider, great goose, Sandwich tern, nian grebe, spoonbill, red- intail, red-throated diver, ercatcher, shoveler, wigeon, nank, common tern, teal,		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N(a)	N (b)	N (b)	N (b)

Marine Mammals

Site Features	Likely ef	fect(s) of I	East Angl	ia ONE N	North										
	Underwa	ater noise		Vessel	Interaction	ons	Indirect	effects or	n prey	Change quality	es to wat	er	In-com	bination	
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Harbour porpoise Phocoena phocoena	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)
Grey seal Halichoerus grypus	Y (d)	Y (d)	Y (d)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)	N (c)		N (c)	N (c)	N (c)	N (c)
Harbour seal <i>Phoca</i> vitulina	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)

Fish





Site 194 Name of European Site Voordelta SAC and SPA **Distance to East Anglia ONE** 93 (windfarm site) and 107 (offshore cable corridor) North (km) Likely effect(s) of East Anglia ONE North Site **Features** Permanent habitat Smothering due Re- mobilisation of Electromagnetic Temporary Underwater noise In-combination physical to increased contaminated and vibration fields (EMF) loss suspended disturbance sediments sediment С 0 С 0 0 С D С 0 D C 0 D С 0 D 0 D D C D Sea N(e) N(e N(N(e) N(e lamprey e) River N(e) N(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) lamprey e) Allis N(e) N(e N(N(e) N(e) N(e shad e) Twaite N(e) N(e N(e N(shad e) **Benthic Habitats** Site Likely effect(s) of East Anglia ONE North **Features** Smothering due to Permanent loss **Temporary** Re- mobilisation of Underwater noise In-combination increased physical contaminate d and vibration suspended sediments disturbance sediment С 0 D С 0 С 0 D С 0 С 0 D D С 0 D D







Site	19	4																
Name of European Site	Vo	oordelt	a SAC	and SF	Α													
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 (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).
- 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 (see Table 7.3 of the HRA Screening Report (APP-044)).
- e) It was agreed as part of the East Anglia ONE North Scoping and Evidence Plan Process (EPP) (see Appendix 10.1 (APP-462)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 and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458))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	195														
Name of European Site:	Vrång	öskärgá	ården S	AC											
Distance to East Anglia ONE North (km)	863														
Site Features	Likely	y effect(s) of East Anglia ONE North													
	Under	vater no	oise	Vessel	Interacti	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 potential impact range of East Anglia ONE North and the site is beyond that of potential for direct or indirect effects (see paragraphs 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).





Site 196

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/Dis	turbance	Barrier E	Effect		Cumula	tive/In-cor	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 196

Name of European Site: Waddenzee (Wadden Sea) SPA

Distance to East Anglia ONE 157

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. (see Table 8.2 of the HRA Screening Report (APP-044)).
- b) Survey data show little or no evidence of Waddenzee SPA breeding waterbird features occurring in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- c) Survey data show little or no evidence of Waddenzee SPA nonbreeding waterbird features occurring in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).





Site 197

Waddenzee SAC Name of European Site:

Distance to East Ang North (km)	lia ONI	E	157 (winc	lfarm sit	te) and	176 (off	shore	cable c	orrido	r))								
Marine Mammals																		
Site Features	Likely	effect(s	s) of East	Anglia O	NE Nor	th												
	Under	water r	noise	Vess	el Intera	ctions	Indire prey	ct effec	cts on	Chang	ges to v	vater	In-cor	mbinatio	on			
	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> grypus	, , , , ,					N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)			
Harbour seal <i>Phoca</i> <i>vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)			
Benthic Habitats																		
Site Features	Perma	anent lo	ess		oorary pl	hysical	Smoti increa suspe sedim	ended	due to		obilisat ninate ents			rwater r ibration		In-con	nbinatio	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)
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	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)

seawater at low tide





Site 197

Waddenzee SAC Name of European Site:

157 (windfarm site) and 176 (offshore cable corridor)) **Distance to East Anglia ONE**

North (km)

- 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 (see paragraphs 218 and 219 for harbour seal, paragraphs 189 and 190 for grey seal and paragraphs 167 and 168 for harbour porpoise, of the HRA Screening Report (APP-044)).
- b) As it has been agreed through the scoping and Evidence Plan Process (EPP) (see Appendix 9.1 (APP-458))that transboundary effects are scoped out for EIA (given the distance to sites in other Members States jurisdictions) these have also been screened out from consideration for HRA purposes.





Site 1	98											
Name of European Site:	Vest West	ray SPA										
Distance to East Anglia ONE 8 North (km)	29											
Site Features	Likely ef	fect(s) of	East Angli	a ONE No	orth							
	Collision	mortality		Displace	ement/Dist	urbance	Barrier E	ffect		Cumulat	ive/In-con	nbination
	С	0	D	С	0	D	С	0	D	С	0	D
Breeding seabird assemblage including as named features 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 (see Table 8.2 of the HRA Screening Report (APP-044).
- 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 (see Table 8.2 of the HRA Screening Report (APP-044).





Site 199

Name of European Westerschelde & Saeftinghe SAC

Site:

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

Anglia ONE North

(km)

Site	Likely	effect(s) of Ea	ast Ang	lia ONE	North															
Features	Perm loss	anent h	nabitat	Temp physic distur	•		Smoth increa suspe sedim	ended	due to		nobilisa ntamina nents			rwater vibration			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)
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 and Evidence Plan Process (EPP) (see Appendix 10.1 (APP-462)that transboundary impacts on fish would be scoped out of the EIA. We have therefore screened them out from consideration in the HRA.







Site	200														
Name of European Site:	Winte	rton – ŀ	lorsey I	Dunes S	AC										
Distance to East Anglia ONE North (km)	60 (ca	ble cor	ridor)												
Site Features	Likely	effect(s) of Eas		ONE No										
	Under	water n	oise	Vessel	Interacti	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
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 (Table 7.3 of the HRA Screening Report (APP-044)).







Site	201															
Name of European Site:	Yell So	ound Co	oast SA	'C												
Distance to East Anglia ONE North (km)	911 (w	indfarn	n site)													
Site Features	Likely	Likely effect(s) of East Anglia ONE North														
	Under	vater no	oise	Vessel	Interact	ions	Indired prey	t effects	on	Change	es to wa	ter	In-com	bination		
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	
Harbour Seal <i>Phoca vitulina</i>	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)	N(a)		N(a)	N(a)	N(a)	N(a)	

a) The distance between the potential impact range of East Anglia ONE North and the extent of any effect on individuals from this site would result in no potential for LSE (see paragraphs 218 and 219 and Table 7.3 of the HRA Screening Report (APP-044)).





Site	202												
Name of European Site:	Ythan Estuary, Sands of Forvie and Meikle Loch SPA												
Distance to East Anglia ONE 611 North (km)													
Site Features	Likely effect(s) of East Anglia ONE North												
	Collisio	Collision mortality			Displacement/Disturbance			Barrier Effect			Cumulative/In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	
Wintering and passage waterbird assemblage including as named features lapwing, eider, pink-footed goose, redshank		N (a)		N (a)	N (a)	N (a)	N (a)	N (a)	N (a)	N (c)	N (c)	N (c)	
Breeding little tern, common tern, Sandwich tern		N (b)		N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	N (b)	

- a) Survey data show little or no evidence of Ythan Estuary, Sands of Forvie & Meikle Loch SPA features occurring in the East Anglia ONE North site (see section 5.1 of Appendix 12.2 (APP-470), and migrations of birds from this SPA are likely to result in negligible numbers passing through the East Anglia ONE North site (see Table 8.2 of the HRA Screening Report (APP-044)).
- 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. (see Table 8.2 of the HRA Screening Report (APP-044))
- 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 (see Table 8.2 of the HRA Screening Report (APP-044)).