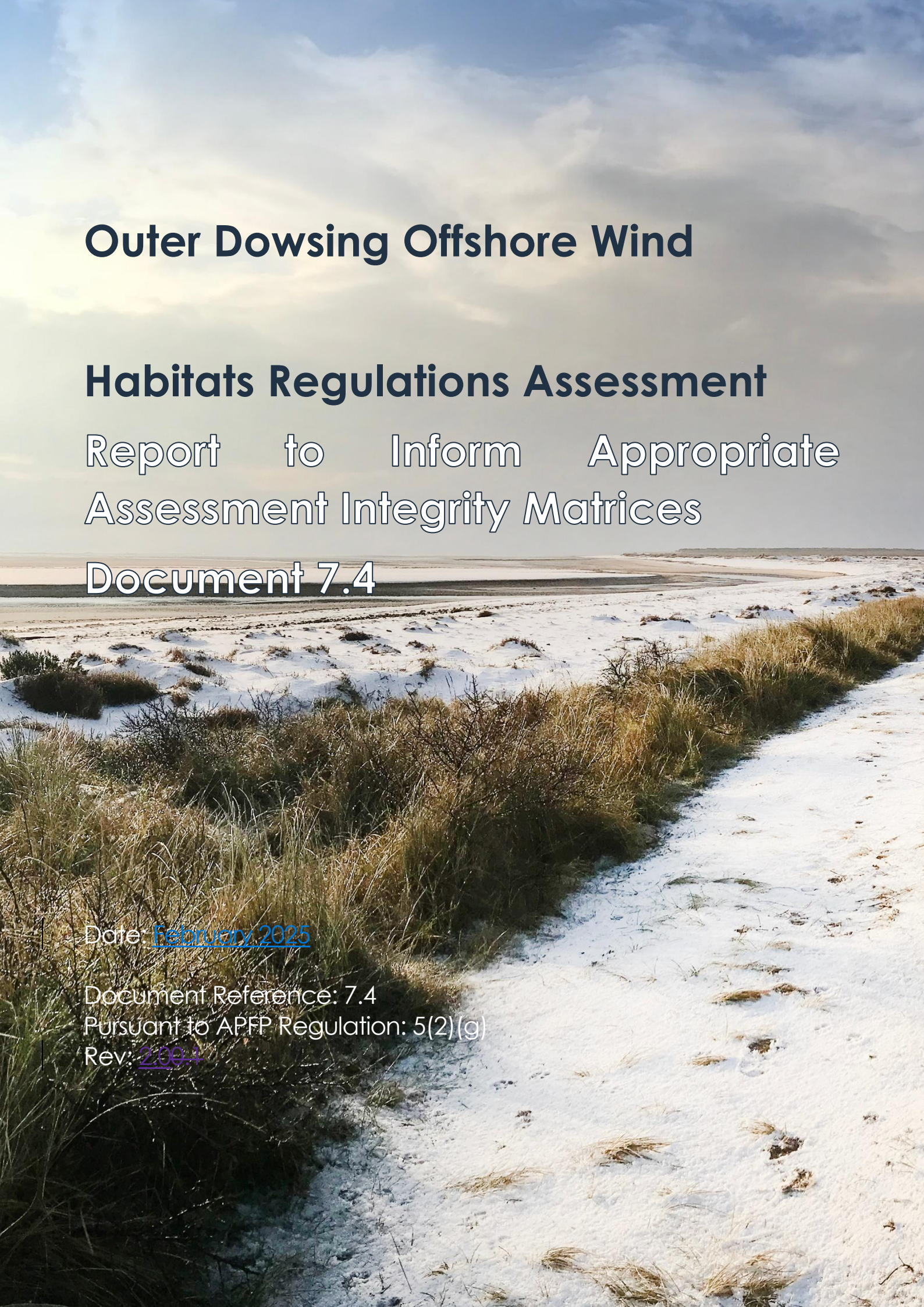

Outer Dowsing Offshore Wind

Habitats Regulations Assessment

Report to Inform Appropriate Assessment Integrity Matrices

Document 7.4

Date: February 2025

Document Reference: 7.4
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Rev: 2.0 1

Company:	**Outer Dowsing Offshore Wind**	Asset:	**Whole Asset**
Project:	**Whole Wind Farm**	Sub Project/Package:	Whole Asset
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Rev No.	Date	Status / Reason for Issue	Author	Checked by	Reviewed by	Approved by
V1.0	March 2024	DCO Application	GoBe	Outer Dowsing	[redacted]	Outer Dowsing
V2.0	February 2025	Deadline 4 submission	GoBe/ SLR	Outer Dowsing	[redacted]	Outer Dowsing

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Acronyms & Terminology

Abbreviations / Acronyms

Abbreviation / Acronym	Description
DCO	Development Consent Order
ECC	Export Cable Corridor
EMF	Electromagnetic fields
HEA	Habitat Regulations Assessment
HRA	Habitat Regulation Assessment
INNS	Invasive Non-Native Species
LSE	Likely Significant Effect
MMMP	Marine Mammal Mitigation Protocol
MPCP	Marine Pollution Contingency Plan
ODOW	Outer Dowsing Offshore Wind (The Project)
ORCP	Offshore Reactive Compensation Platform
PEMP	Project Environmental Management Plan
PTS	Permanent Threshold Shifts
RAMSAR	
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SPA	Special Protection Area

Terminology

Term	Definition
The Applicant	GT R4 Ltd. The Applicant making the application for a DCO. The Applicant is GT R4 Limited (a joint venture between Corio Generation, Total Energies and Gulf Energy Development (GULF)), trading as Outer Dowsing Offshore Wind. The Project is being developed by Corio Generation (a wholly owned Green Investment Group portfolio company), TotalEnergies and GULF.
Baseline	The status of the environment at the time of assessment without the development in place.
Development Consent Order (DOC)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS) for Department for Energy Security and Net Zero (DESNZ).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the sensitivity of the receptor, in accordance with defined significance criteria.
Export Cables	High voltage cables which transmit power from the Offshore Substations (OSS) to the Onshore Substation (OnSS) via an Offshore Reactive Compensation Platform (ORCP) if required, which may include one or more auxiliary cables (normally fibre optic cables).
Habitats Regulations Assessment (HRA)	A process which helps determine likely significant effects and (where appropriate) assesses adverse impacts on the integrity of European conservation sites and Ramsar sites. The process consists of up to four stages of assessment: screening, appropriate assessment, assessment of alternative

Term	Definition
	solutions and assessment of imperative reasons of over-riding public interest (IROPI) and compensatory measures
Impact	An impact to the receiving environment is defined as any change to its baseline condition, either adverse or beneficial
Intertidal	The area between Mean High Water Springs (MHWS) and Mean Low Water Springs (MLWS)
Mitigation	Mitigation measures are commitments made by the Project to reduce and/or eliminate the potential for significant effects to arise as a result of the Project. Mitigation measures can be embedded (part of the project design) or secondarily added to reduce impacts in the case of potentially significant effects
Offshore Export Cable Corridor (ECC)	The Offshore Export Cable Corridor (Offshore ECC) is the area within the Order Limits within which the export cables running from the ~~array~~Array Area to landfall will be situated.
Offshore Reactive Compensation Platform (ORCP)	A structure attached to the seabed by means of a foundation, with one or more decks and a helicopter platform (including bird deterrents) housing electrical reactors and switchgear for the purpose of the efficient transfer of power in the course of HVAC transmission by providing reactive compensation
Outer Dowsing Offshore Wind (ODOW)	The Project.
The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
The Project	Outer Dowsing Offshore Wind including proposed onshore and offshore infrastructure.
Receptor	A distinct part of the environment on which effects could occur and can be the subject of specific assessments. Examples of receptors include species (or groups) of animals or plants, people (often categorised further such as 'residential' or those using areas for amenity or recreation), watercourses etc

1 Matrix Key

1. Evidence for, or against, adverse effects on designated site qualifying features and Adverse Effect on Integrity (AEoI) is detailed within the footnotes to the integrity matrices.

✓ = Potential for AEoI identified for this feature / effect

✗ = No potential for AEoI identified for this feature / effect

C = Construction

O = Operation and Maintenance

D = Decommissioning

Effect not relevant to feature (no potential for pathway)

2 Index to Matrices

2. This appendix presents the screening matrices for Outer Dowsing Offshore Wind Farm (ODOW, hereafter 'the Project') promoted by Outer Dowsing Offshore Wind (hereafter 'the Applicant') in accordance with the structure and format specific in the Planning Inspectorate Advice Note 10 (August 2022, version 9).

Table 2.1 Details on all Matrices included in this Appendix

Matrix	Site included in the assessment
Matrix 1	North Norfolk Sandbanks and Saturn Reef SAC
Matrix 2	Inner Dowsing, Race Bank, and North Ridge Sac
Matrix 3	The Wash and North Norfolk Coast SAC
Matrix 4	Humber Estuary RAMSAR
Matrix 5	Gibraltar Point RAMSAR
Matrix 6	Berwickshire and North Northumberland Coast SAC
Matrix 7	Moray Firth SAC
Matrix 8	Southern North Sea SAC
Matrix 9	Humber Estuary SAC and RAMSAR
Matrix 10	The Wash and North Norfolk Coast SAC
Matrix 11	Transboundary sites for Harbour and Grey Seals (12 sites)
Matrix 12	Greater Wash SPA
Matrix 13	Humber Estuary RAMSAR
Matrix 14	Humber Estuary SPA
Matrix 15	North Norfolk Coast SPA
Matrix 16	Gibraltar Point RAMSAR
Matrix 17	Gibraltar Point SPA
Matrix 18	The Wash RAMSAR
Matrix 19	The Wash SPA
Matrix 20	Flamborough and Filey Coast SPA
Matrix 21	Alde-Ore Estuary RAMSAR
Matrix 22	Alde-Ore Estuary SPA
Matrix 23	Coquet Island SPA
Matrix 24	Farne Islands SPA
Matrix 25	Forth Islands SPA
Matrix 26	Humber Estuary SAC
Matrix 27	River Derwent SAC
Matrix 28	Humber Estuary SPA
Matrix 29	Humber Estuary RAMSAR
Matrix 30	Saltfleetby- Theddlethorpe Dunes & Gibraltar Point SAC
Matrix 31	The Wash SPA
Matrix 32	The Wash RAMSAR
Matrix 33	The Wash & North Norfolk Coast SAC
Matrix 34	Greater Wash SPA
Matrix 35	Gibraltar Point SPA
Matrix 36	Gibraltar Point RAMSAR

Matrix	Site included in the assessment
Matrix 37	North Norfolk SPA
Matrix 38	North Norfolk RAMSAR

3 Matrix Effects Considered

3. The effects on designated sites which are assessed within the Report to Inform Appropriate Assessment (RIAA) for the Habitats Regulation Assessment (HRA) of Outer Dowsing Offshore Wind, are those screened in for a potential Likely Significant Effect (LSE) within the Screening Report (Document Reference 7.2). These are listed out within Table 3.1~~Table 3.1~~ below:

Table 3.1: Designated Sites and Impacts considered for assessment within the RIAA

Designations	Impacts Considered in Matrices
Subtidal and intertidal benthic ecology	
North Norfolk Sandbanks and Saturn Reef SAC	Suspended sediment/ deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes In-combination
Inner Dowsing Sandbanks and Saturn Reef SAC	Physical habitat loss/ disturbance Suspended sediment/ deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes Electromagnetic fields (EMF) In-combination
The Wash and North Norfolk Coast SAC	Suspended sediment/ deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes In-combination
Humber Estuary Ramsar	Suspended sediment/ deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes In-combination
Humber Estuary SAC	Suspended sediment/ deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes In-combination
Gibraltar Point Ramsar	Suspended sediment/ deposition Indirect pollution Accidental pollution

Designations	Impacts Considered in Matrices
	Invasive Non-Native Species (INNS) Changes to physical processes In-combination
The Wash Ramsar	Suspended sediment / deposition Indirect pollution Accidental pollution Invasive Non-Native Species (INNS) Changes to physical processes In-combination
Marine Mammals	
Southern North Sea SAC	Underwater noise Vessel disturbance Collision risk Indirect pollution Accidental pollution Habitat loss Changes to prey In-combination effects
Humber Estuary SAC and RAMSAR	Underwater noise Vessel disturbance Changes to prey Disturbance at haul out Collision risk In-combination effects
Berwickshire and North Northumberland Coast SAC	Underwater noise Vessel disturbance Changes to prey Collision risk In-combination effects
The Wash and North Norfolk Coast SAC	Underwater noise Vessel disturbance Changes to prey Collision risk In-combination effects
Moray Firth SAC	Underwater noise Vessel disturbance Collision Risk Changes to prey In-combination effects
Transboundary sites for seals (12 sites)	Underwater noise Vessel disturbance Changes to prey Collision Risk In-combination effects
Offshore and intertidal ornithology	

Designations	Impacts Considered in Matrices
Greater Wash SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of the ORCP Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines Indirect impacts through effects on habitats and prey species
Humber Estuary Ramsar	Collision risk
Humber Estuary SPA	Collision risk
North Norfolk Coast SPA	Collision risk Barrier effects due to the presence of turbines
Gibraltar Point Ramsar	Collision risk Barrier effects due to the presence of turbines
Gibraltar Point SPA	Collision risk Barrier effects due to the presence of turbines
The Wash Ramsar	Collision risk Barrier effects due to the presence of turbines
The Wash SPA	Collision risk Barrier effects due to the presence of turbines
Flamborough and Filey Coast SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Alde-Ore Estuary Ramsar	Collision risk
Alde-Ore Estuary SPA	Collision risk
Coquet Island SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines
Farne Islands SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk

Designations	Impacts Considered in Matrices
St Abb's Head to Fast Castle SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Forth Islands SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk
Fowlsheugh SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Buchan Ness to Collieston Coast SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Troup, Pennan and Lion's Heads SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
East Caithness Cliffs SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
North Caithness Cliffs SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones

Designations	Impacts Considered in Matrices
	Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Copinsay SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Hoy SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Calf of Eday SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Rousay SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Marwick Head SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Fair Isle SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk

Designations	Impacts Considered in Matrices
	Barrier effects due to the presence of turbines
West Westray SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Sumburgh Head SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Noss SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Foula SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Hermaness, Saxa Vord and Valla Field SPA	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones Direct disturbance and displacement due to the presence of turbines Collision risk Barrier effects due to the presence of turbines
Migratory fish	
Humber Estuary SAC	Underwater noise, In-combination effects
Onshore ecology	
Humber Estuary SPA	Risk of disturbance/ displacement, Loss of foraging, roosting and nesting habitat for birds outside the SPA, Risk of pollution
Humber Estuary Ramsar Site	Loss of estuary habitats,

Designations	Impacts Considered in Matrices
	Risk of disturbance /displacement, Loss of foraging and roosting habitat for birds outside the Ramsar site, Risk of pollution
Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC	Risk of loss, damage and/ or disturbance of habitats Disturbance of species Risk of pollution
The Wash SPA	Risk of disturbance/ displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution
The Wash Ramsar Site	Risk of loss or damage to habitats, Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution,
The Wash & North Norfolk Coast SAC	Risk of loss or damage to habitats, Risk of disturbance Loss of foraging, roosting and nesting habitat, Reduction of habitat quality, Displacement of otter and reduction of otter habitat
Greater Wash SPA	Risk of loss of or damage to habitats, Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution
Gibraltar Point SPA	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat, Risk of pollution
Gibraltar Point Ramsar Site	Risk of loss of or damage to habitats Risk of disturbance Loss of foraging, roosting and nesting habitat, Risk of pollution Loss or decline in populations of scarce invertebrates and plants
North Norfolk SPA	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat
North Norfolk Ramsar	Risk of disturbance/displacement, Loss of foraging, roosting and nesting habitat

3.1 Sites Designated with Subtidal and Intertidal Benthic Ecology Features

Matrix 1: North Norfolk Sandbanks and Saturn Reef SAC

Name of designated site:	North Norfolk Sandbanks and Saturn Reef SAC
Site Code:	UK0030358
Closest Distance to Project	6.0 km to array area / 6.85.9 km to ~~array~~WTG area~~/~~ / 17.8~~7~~ km to ECC / 0.0 km to ANS / 44.239.5 km to biogenic reef / 72.63 ~~69.6~~km to ORCP
Likely Effects of Project	

Effect	Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Reefs	X a		X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d	X e	X e	X e
Sandbanks which are slightly covered by sea water all of the time	X a		X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d	X e	X e	X e

Evidence supporting conclusions

X a Due to the short-term and temporary nature of the construction and decommissioning works, the reversibility of effect, recoverability of receptors, localised nature of effects and distance between the high concentration areas and the designated sites, and with consideration of relevant mitigation there is no potential for AEoI.

X b With consideration of the PEMP and supporting MPCP, we have concluded that there is no pathway for effect and therefore no potential for AEoI.

X c Based on the lack of evidence of any adverse effect from INNS and offshore windfarms and consideration of the PEMP, there is no potential for AEoI.

X d Any changes in seabed morphology are not considered likely to influence the overall form and function of the system and there is no potential for AEoI.

X e There is no physical overlap with the designated site or its features, and with consideration that no AEoI was concluded for any potential impact in the alone assessment we therefore conclude no pathway for AEoI in-combination.

End of Matrix 1

Matrix 2: Inner Dowsing, Race Bank, and North Ridge SAC

Name of designated site:	Inner Dowsing, Race Bank, and North Ridge SAC																							
Site Code:	UK0030370																							
Closest Distance to Project	17.3 km to array area / 17.38 km to ~~array~~WTG area / 0.0 km to ECC / 30.0 km to ANS / 0.0 km to biogenic reef / 0.0 km to ORCP																							
Likely Effects of Project																								
Effect	Physical habitat loss / disturbance			Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			EMF			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Reefs	Xe	Xe	Xe	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd		Xg		Xh	Xh	Xh
Sandbanks which are slightly covered by sea water all of the time	Xf	Xf	Xf	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd		Xg		Xi	Xi	Xi

Evidence supporting conclusions

Xa Due to the short-term and temporary nature of the construction and decommissioning works, the reversibility of effect, recoverability of receptors, localised nature of effects and distance between the high concentration areas and the designated sites, and with consideration of relevant mitigation there is no potential for AEoI.

Xb This consideration of the PEMP and supporting MPCP it has been concluded that there is no pathway for effect and therefore no potential for AEoI.

Xc Based on the lack of evidence of any adverse effect from INNS and offshore windfarms and consideration of the PEMP, there is no potential for AEoI.

Xd Any changes in seabed morphology are not considered likely to influence the overall form and function of the system, with this designated site being viewed as having moderate potential to accommodate the proposed changes, it is therefore concluded there is no potential for AEoI.

Xe A Biogenic Reef Mitigation Plan which comprises micrositing works in addition to confirmation that none of the protected features vulnerable to the impact fall within the export cable corridor means that there will be no physical habitat loss or disturbance. Furthermore, considering the short-term and temporary nature of the construction and decommissioning, reversibility of effect and localised nature of impacts it is concluded that there is no potential for AEoI.

Xf Given the small footprint of the export cable corridor / cables, short-term and temporary nature of the construction and decommissioning, reversibility of effect and localised nature of impacts in addition to the fact the cabling will be removed at the end of the operational life of the project therefore meaning any impacts are temporary, there is no potential for AEoI.

Xg As the cables will be buried, any behavioural responses are concluded to be mitigated to a negligible level and there is no potential for AEoI.

Xh There will be no interaction between the project and this feature, therefore there is no pathway for effect.

Xi With consideration of the medium to high recoverability of the communities of the sandbank features, and the embedded mitigation for the Project to redistribute any removed sediment back within the SAC (to support the recovery of the physical sandbanks), and the ongoing sediment transport to the SAC, it is expected that the sandbank features will recover within a short (1 – 2 years) timeframe. There is, therefore, no potential for AEoI on the feature

End of Matrix 2

Matrix 3: The Wash and North Norfolk Coast SAC

Name of designated site:	The Wash and North Norfolk Coast SAC																		
Site Code:	UK0017075																		
Closest Distance to Project	47.8 km to array area/ 47.8 ~~8.4~~ km to ~~array~~WTG area / 13.4 km to ECC / 50.54 km to ANS / 8.7 ~~0.0~~ km to biogenic reef / 19.3 km to ORCP																		
Likely Effects of Project																			
Effect	Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	
Sandbanks which are slightly covered by sea water all of the time	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe	
Mudflats and sandflats not covered by seawater at low tide	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe	
Large shallow inlets and bays	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe	
Reefs	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe	
Salicornia and other annuals colonizing mud and sand	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe	
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe	

Evidence supporting conclusions

Xa Due to the short-term and temporary nature of the construction and decommissioning works, the reversibility of effect, recoverability of receptors, localised nature of effects and distance between the high concentration areas and the designated sites, and with consideration of relevant mitigation, there is no potential for AEoI.

Xb On consideration of the PEMP and supporting MPCP it has been concluded that there is no pathway for effect and therefore no potential for AEoI.

Xc Based on the lack of evidence of any adverse effect from INNS and offshore windfarms and consideration of the PEMP, there is no potential for AEoI.

Xd Any changes in seabed morphology are not considered likely to influence the overall form and function of the system and there is no potential for AEoI.

Xe There is no physical overlap with the designated site or its features, and with consideration that no AEoI was concluded for any potential impact in the alone assessment we therefore conclude no pathway for AEoI in-combination.

End of Matrix 3

Matrix 4: Humber Estuary Ramsar

Name of designated site:	Humber Estuary Ramsar																	
Site Code:	UK11031 (663)																	
Closest Distance to Project	54.0 km to array area / 54.0 km to ~~array~~WTG area / 12.5~~1~~ km to ECC / 47.5 km to ANS / 20.9~~18.2~~ km to biogenic reef / 18.7 ~~5.3~~km to ORCP																	
Likely Effects of Project																		
Effect	Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Dune systems with humid dune slacks	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Estuarine waters	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Intertidal mud and sand flats	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Saltmarshes	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Coastal brackish/saline lagoons	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe

Evidence supporting conclusions

Xa Due to the short-term and temporary nature of the construction and decommissioning works, the reversibility of effect, recoverability of receptors, localised nature of effects and distance between the high concentration areas and the designated sites, and with consideration of relevant mitigation there is no potential for AEoI.

Xb This consideration of the PEMP and supporting MPCP it has been concluded that there is no pathway for effect and therefore no potential for AEoI.

Xc Based on the lack of evidence of any adverse effect from INNS and offshore windfarms and consideration of the PEMP, there is no potential for AEoI.

Xd Any changes in seabed morphology are not considered likely to influence the overall form and function of the system and there is no potential for AEoI.

Xe No pathway for in-combination effects to arise

End of Matrix 4

Matrix 5: Humber Estuary SAC

Name of designated site:	Humber Estuary SACRamsar
Site Code:	UK00301701031 (663)
Closest Distance to Project	54.4 km to array area / 54.4 km to arrayWTG area / 18.95 km to ECC / 47.5 km to ANS / 24.38 km to biogenic reef / 23.8 19.7km to ORCP
Likely Effects of Project	

Effect	Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
~~Dune systems with humid dune slacks~~Estuaries	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
~~Estuarine waters~~Mudflats and sandflats not covered by seawater at low tide	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
~~Intertidal mud and sand flats~~Sandbanks which are slightly covered by sea wat~~a~~er all the time	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Salicornia and other annuals colonizing mud and sand~~Saltmarshes~~	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
~~Coastal brackish/saline lagoons~~Atlantic salt meadows	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe

Evidence supporting conclusions

Xa Due to the short-term and temporary nature of the construction and decommissioning works, the reversibility of effect, recoverability of receptors, localised nature of effects and distance between the high concentration areas and the designated sites, and with consideration of relevant mitigation there is no potential for AEoI.

Xb This consideration of the PEMP and supporting MPCP it has been concluded that there is no pathway for effect and therefore no potential for AEoI.

Xc Based on the lack of evidence of any adverse effect from INNS and offshore windfarms and consideration of the PEMP, there is no potential for AEoI.

Xd Any changes in seabed morphology are not considered likely to influence the overall form and function of the system and there is no potential for AEoI.

Xe No pathway for in-combination effects to arise

End of Matrix 5

Matrix 6: Gibraltar Point Ramsar

Name of designated site:	Gibraltar Point Ramsar																	
Site Code:	UK11027 (589)																	
Closest Distance to Project	62.9 km to array area / 623.91 km to ~~array~~WTG area / 13.43 km to ECC / 70.65 km to ANS / 11.76 km to biogenic reef / 19.3 km to ORCP																	
Likely Effects of Project																		
Effect	Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Estuarine mudflats	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Sandbanks	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Saltmarsh	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Dunes	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe

Evidence supporting conclusions

Xa Due to the short-term and temporary nature of the construction and decommissioning works, the reversibility of effect, recoverability of receptors, localised nature of effects and distance between the high concentration areas and the designated sites, and with consideration of relevant mitigation there is no potential for AEoI.

Xb This consideration of the PEMP and supporting MPCP it has been concluded that there is no pathway for effect and therefore no potential for AEoI.

Xc Based on the lack of evidence of any adverse effect from INNS and offshore windfarms and consideration of the PEMP, there is no potential for AEoI.

Xd Any changes in seabed morphology are not considered likely to influence the overall form and function of the system and there is no potential for AEoI.

Xe No pathway for in-combination effects to arise

End of Matrix 6

Matrix 7: The Wash Ramsar

Name of designated site:	The Wash Ramsar
Site Code:	UK11072 (395)
Closest Distance to Project	66.3 km to array area / 66.33.1 km to arrayWTG area / 163.53 km to ECC / 74.00.5 km to ANS / 13.8 1.6 km to biogenic reef / 22.87 19.3km to ORCP
Likely Effects of Project	

Effect	Suspended sediment / deposition			Indirect pollution			Accidental pollution			INNS			Changes to physical processes			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
~~Estuarine mudflats~~Saltmarshes	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
~~Sandbanks~~Estuaries	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Major intertidal banks of sand and mud~~Saltmarsh~~	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Shallow water~~Dunes~~	Xa		Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd	Xe	Xe	Xe
Deep channels																		

Evidence supporting conclusions

Xa Due to the short-term and temporary nature of the construction and decommissioning works, the reversibility of effect, recoverability of receptors, localised nature of effects and distance between the high concentration areas and the designated sites, and with consideration of relevant mitigation there is no potential for AEoI.

Xb This consideration of the PEMP and supporting MPCP it has been concluded that there is no pathway for effect and therefore no potential for AEoI.

Xc Based on the lack of evidence of any adverse effect from INNS and offshore windfarms and consideration of the PEMP, there is no potential for AEoI.

Xd Any changes in seabed morphology are not considered likely to influence the overall form and function of the system and there is no potential for AEoI.

Xe No pathway for in-combination effects to arise

End of Matrix 7

3.2 Sites Designated with Marine Mammal Features

Matrix 8: Berwickshire and North Northumberland Coast SAC

Name of designated site:	Berwickshire and North Northumberland Coast SAC														
Site Code:	UK00170723039 5														
Closest Distance to Project (Offshore)	260.4 km to Array Area (WTG) / 260.74 km to ~~array~~Array (WTG)WTG area / 264.52.0 km to ECC / 2352.76 km to ANS / 262.8~~59.2~~ km to biogenic reef / 267.2 ~~2.0~~km to ORCP														
Likely Effects of Project															
Effect	Underwater noise			Vessel disturbance			Collision risk			Changes to prey			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Grey Seal	Xa	Xa	Xa	Xb	Xb	Xb	Xb	Xb	Xb	Xc	Xc	Xc	Xd	Xd	Xd

Evidence supporting conclusions

Xa The MMMP suitably minimises the risk of injury or mortality impacting this feature during construction and decommissioning activities that produce underwater noise. Operational and Maintenance underwater noise is considered to be negligible due to consistent proximity required to have any impact and the extent of low level noise produced by operational windfarms. Therefore it has been concluded that the project will not have AEoI on this feature.

Xb It has been concluded that the increase in vessel movements caused by any stage of the project is not sufficient to cause a change in mortality, injury or significant disturbance with consideration of the current levels of vessel movements from shipping and other activities. Therefore there is no potential for AEoI.

Xc We conclude that underwater noise, vessel disturbance/collision and pollution are negligible risk to prey, with consideration of the PEMP, MMMP and adoption of a Vessel Management Plan this is further reduced. Overall there is no potential of AEoI via this impact.

Xd With consideration of the implementation of the MMMP, and conclusions that there will be no AEoI in the assessment alone (as above), we conclude there is no potential AEoI for in-combination impacts.

End of Matrix 8

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Matrix 9: Moray Firth SAC

Name of designated site:	Moray Firth SAC															
Site Code:	UK0019808															
Closest Distance to Project (Offshore)	535.7 km to Array Area / 537.3~~15.0~~ km to ~~array~~~~Array (WTG)~~WTG area ~~-~~/ 546.9~~525.5~~ km to ECC / 512.1~~487.0~~ km to ANS / 544.1~~21.2~~ km to biogenic reef / ~~5~~549.0 ~~25.5~~km to ORCP															
Likely Effects of Project																
Effect	Underwater noise			Vessel disturbance			Collision risk			Changes to prey			In-combination effects			
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	
Bottlenose dolphin	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d	

Evidence supporting conclusions

X a With consideration of the population densities and distance from the designated site in additional to the nature of potential impact being short-term and temporary it is concluded that there was negligible potential of AEoI as a result of underwater noise production. Operational and Maintenance underwater noise is considered to be negligible due to consistent proximity required to have any impact and the extent of low level noise produced by operational windfarms and therefore support the assessment of no AEoI.

X b Due to the significant distance from the site it is considered that there is a negligible potential for AEoI for this impact.

X c We conclude that underwater noise, vessel disturbance/collision and pollution are negligible risk to prey, with consideration of the PEMP, MMMP and adoption of a Vessel Management Plan this is further reduced. Overall, there is no potential of AEoI via this impact.

X d With consideration of the significant distance from the site and conclusion of no AEoI alone, we conclude there is no potential for AEoI in-combination.

End of Matrix 9

Matrix 10: Southern North Sea SAC

Name of designated site:	Southern North Sea SAC																							
Site Code:	UK0030395																							
Closest Distance to Project (Offshore)	0.0 km to Array Area / 0.0 km to ~~array~~~~Array (WTG)~~WTG area / 1.1 km to ECC / 0.0 km to ANS / 36.0 ~~4.7~~ km to biogenic reef / 48.2 ~~2.3~~km to ORCP																							
Likely Effects of Project																								
Effect	Habitat Loss			Underwater noise			Vessel disturbance			Collision risk			Indirect pollution			Accidental pollution			Changes to prey			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Harbour porpoise	Xa	Xa	Xa	Xb	Xb	Xb	Xc	Xc	Xc	Xc	Xc	Xc	Xd	Xd	Xd	Xd	Xd	Xd	Xe	Xe	Xe	Xf	Xf	Xf

Evidence supporting conclusions

Xa

Xb The MMMP suitably minimises the risk of injury or mortality impacting this feature during construction and decommissioning activities that produce underwater noise. Operational and Maintenance underwater noise is considered to be negligible due to consistent proximity required to have any impact and the extent of low level noise produced by operational windfarms. Therefore it has been concluded that the project will not have AEoI on this feature.

Xc It has been concluded that the increase in vessel movements caused by any stage of the project is not sufficient to cause a change in mortality, injury or significant disturbance with consideration of the current levels of vessel movements from shipping and other activities and Vessel Management Plan that will be adopted. Therefore there is no potential for AEoI.

Xd With the development of a MPCP which will form part of the wider PEMP and be part of its implementation there is no potential for AEoI via this effect.

Xe We conclude that underwater noise, vessel disturbance/collision and pollution are negligible risk to prey, with consideration of the PEMP, MMMP and adoption of a Vessel Management Plan this is further reduced. Overall there is no potential of AEoI via this impact.

Xf No pathway for in-combination effects to arise.

End of Matrix 10

Matrix 11: Humber Estuary SAC and RAMSAR

Name of designated site:	Humber Estuary SAC and RAMSAR
Site Code:	UK0030170 and UK11031 (663)
Closest Distance to Project (offshore) SAC	54.4 km to Array Area / 54.4 km to ~~array~~Array (WTG)WTG area / 18.95 km to ECC / 47.5 km to ANS / 24.3~~.8~~ km to biogenic reef / ~~19.~~23.8 ~~7~~km to ORCP
Closest Distance to Project (offshore) RAMSAR	54.04 km to Array Area / 54.04 km to ~~Array (WTG)~~WTG area / 12.5 km to ECC / 47.5 km to ANS / 20.9 km to biogenic reef / 18.7 km to ORCP
Likely Effects of Project	

Effect	Underwater noise			Vessel disturbance			Collision risk			Changes to prey			Disturbance at haul out			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	C	C	O	D	C	O	D	C	O	D
Grey seal	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X b	X b	X b	X d	X d	X d

Evidence supporting conclusions

X a The MMMP suitably minimises the risk of injury or mortality impacting this feature during construction and decommissioning activities that produce underwater noise. Operational and Maintenance underwater noise is considered to be negligible due to consistent proximity required to have any impact and the extent of low level noise produced by operational windfarms. Therefore it has been concluded that the project will not have AEoI on this feature.

X b It has been concluded that the increase in vessel movements caused by any stage of the project is not sufficient to cause a change in mortality, injury or significant disturbance with consideration of the current levels of vessel movements from shipping and other activities. Therefore there is no potential for AEoI.

X c We conclude that underwater noise, vessel disturbance/collision and pollution are negligible risk to prey, with consideration of the PEMP, MMMP and adoption of a Vessel Management Plan this is further reduced. Overall there is no potential of AEoI via this impact.

X d With consideration of the implementation of the MMMP, and conclusions that there will be no AEoI in the assessment alone (as above), we conclude there is no potential AEoI for in-combination impacts.

End of Matrix 11

Matrix 12: The Wash and North Norfolk Coast SAC

Name of designated site:	The Wash and North Norfolk Coast SAC														
Site Code:	UK0017075														
Closest Distance to Project (offshore)	47.8 km to Array Area / 47.8~~8.4~~ km to ~~array~~~~Array (WTG)~~WTG area / 13.4 km to ECC / 50.54 km to ANS / 8.7~~0.0~~ km to biogenic reef / 19.3 km to ORCP														
Likely Effects of Project															
Effect	Underwater noise			Vessel disturbance			Collision risk			Changes to prey			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	C	C	O	D	C	O	D
Harbour seal	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d

Evidence supporting conclusions

X a The MMMP suitably minimises the risk of injury or mortality impacting this feature during construction and decommissioning activities that produce underwater noise. Operational and Maintenance underwater noise is considered to be negligible due to consistent proximity required to have any impact and the extent of low level noise produced by operational windfarms. Therefore it has been concluded that the project will not have AEoI on this feature.

X b It has been concluded that the increase in vessel movements caused by any stage of the project is not sufficient to cause a change in mortality, injury or significant disturbance with consideration of the current levels of vessel movements from shipping and other activities. Therefore there is no potential for AEoI.

X c We conclude that underwater noise, vessel disturbance/collision and pollution are negligible risk to prey, with consideration of the PEMP, MMMP and adoption of a Vessel Management Plan this is further reduced. Overall there is no potential of AEoI via this impact.

X d With consideration of the implementation of the MMMP, and conclusions that there will be no AEoI in the assessment alone (as above), we conclude there is no potential AEoI for in-combination impacts.

End of Matrix 12

Matrix 13: Transboundary sites for Harbour and Grey seals (12 sites)

Name of designated site:	Transboundary sites for Harbour and Grey seals (12 sites)														
Site Code:	Various														
Closest Distance to Project	Various														
Likely Effects of Project															
Effect	Underwater noise			Vessel disturbance			Collision risk			Changes to prey			In-combination effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Bancs de Flandres SCA;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Doggersbank (Netherlands) SAC;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Klaverbank SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Noordzeekustone SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
SBZ 1 SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
SBZ 2 SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
SBZ 3 SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Vlaamse Bankend SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Vlakte van de Raan SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Voordelta SCI;	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Waddenzee SCI; and	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d
Westerschelde & Saeftinghe SCI.	X a	X a	X a	X b	X b	X b	X b	X b	X b	X c	X c	X c	X d	X d	X d

Evidence supporting conclusions

X a The MMMP suitably minimises the risk of injury or mortality impacting this feature during construction and decommissioning activities that produce underwater noise. Operational and Maintenance underwater noise is considered to be negligible due to consistent proximity required to have any impact and the extent of low level noise produced by operational windfarms. Therefore it has been concluded that the project will not have AEoI on this feature.

X b It has been concluded that the increase in vessel movements caused by any stage of the project is not sufficient to cause a change in mortality, injury or significant disturbance with consideration of the current levels of vessel movements from shipping and other activities. Therefore there is no potential for AEoI.

X c We conclude that underwater noise, vessel disturbance/collision and pollution are negligible risk to prey, with consideration of the PEMP, MMMP and adoption of a Vessel Management Plan this is further reduced. Overall there is no potential of AEoI via this impact.

X d With consideration of the implementation of the MMMP, and conclusions that there will be no AEoI in the assessment alone (as above), we conclude there is no potential AEoI for in-combination impacts.

End of Matrix 13

3.3 Sites Designated with Offshore and Intertidal Ornithology Features

Matrix 14: Greater Wash SPA

~~Name of designated site:~~	~~Greater Wash SPA~~				
~~Site Code:~~	~~UK9020329~~				
~~Closest Distance to Project~~	~~24.8 km to Array Area / 24.8 km to WTG area / 0.0 km to ECC / 24.0 km to ANS / 0.0 km to biogenic reef / 0.0 km to ORCP~~				
~~Closest Distance to Project~~	~~24.8 km to Array Area / 24.86 km to arrayArray (WTG)WTG area / 0.0 km to ECC / 24.0 km to ANS / 0.0 km to biogenic reef / 0.0 km to ORCP~~				
~~Likely Effects of Project~~					
~~Effect~~	~~Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones~~	~~Direct disturbance and displacement due to the presence of turbines~~	~~Direct disturbance and displacement due to the presence of the ORCP~~	~~Collision risk due to the presence of turbines~~	~~In-combination~~

~~Effect~~	~~Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones~~	~~Direct disturbance and displacement due to the presence of turbines~~	~~Direct disturbance and displacement due to the presence of the ORCP~~	~~Collision risk due to the presence of turbines~~	~~In-combination~~	

Name of designated site	Greater Wash SPA
Site Code	UK9020329
Closest Distance to Project	24.8 km to Array Area / 24.8 km to WTG area / 0.0 km to ECC / 24.0 km to ANS / 0.0 km to biogenic reef / 0.0 km to ORCP
Likely effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones	Direct disturbance and displacement due to the presence of turbines	Direct disturbance and displacement due to the presence of the ORCP	Collision risk due to the	In-combination

~~Name of designated site:~~ ~~Greater Wash SPA~~															
												presence of turbines			
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Common scoter	X a	X a	X a	X a	X a	X a		X e			~~X c~~		X ~~c d~~	X ~~c d~~	X ~~c d~~
Little gull	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~					X ~~b c~~		~~X e~~	X ~~d e~~	~~X e~~
Red-throated diver	X a	X a	X a	X a	X a	X a		X f			~~X c~~		X ~~c d~~	X ~~c d~~	X ~~c d~~
Little tern	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~					X ~~b c~~		~~X e~~	X ~~d e~~	~~X e~~
Common tern	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~					X ~~b c~~		~~X e~~	X ~~d e~~	~~X e~~
Sandwich tern	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~					X ~~b c~~		~~X e~~	X ~~d e~~	~~X e~~

Evidence supporting conclusions

X a The impact has been concluded to be a negligible increase in mortality. With consideration that the effects are short-term, temporary and reversible, with birds anticipating on returning at the end of construction works should they be displaced during them. Therefore there is no potential for AEoI for this species.~~.~~

~~X b~~ ~~The potential effects are considered to be short-term, temporary and reversible, with birds anticipating on returning at the end of construction works should they be displaced during them. Therefore there is no potential for AEoI for this species.~~

X ~~b c~~ With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.

X ~~c d~~ With consideration of the low levels of disturbance and negligible numbers impacted, meaning that there would need to ~40 similar projects to cause a change in baseline, we conclude no potential for AEoI on this designated site and species in-combination.

X ~~d e~~ As above, considering the negligible levels of impact to migratory birds when considered alone, we conclude no potential for AEoI in-combination.

X e Due to the lack of spatial overlap between the common scoter feature and the ORCP, any potential impact from the presence of the ORCP will not adversely affect the integrity of the Greater Wash SPA in relation to its conservation objectives. In particular, the density of common scoter is very low and this species has much higher utilisation in other inshore areas of the SPA

X f With consideration of no measureable displacement effect predicted from the presence of the ORCPs and if a small scale effect were to occur it would fall wholly within the existing displacement effects from the Lincs OWF, there is no AEOI predicted for this species.

End of Matrix 14

Matrix 15: Humber Estuary Ramsar

Name of designated site: Site Code: Closest Distance to Project Likely Effects of Project	Humber Estuary Ramsar UK11031 (663) 54.0 km to Array Area / 54.0 km to ~~array~~Array ~~(WTG)~~WTG area / 12.51~~1~~ km to ECC / 47.5 km to ANS / 20.918~~18.2~~ km to biogenic reef / 18.75~~5.3~~ km to ORCP					
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D
European golden plover		X a			X a	
Red knot		X a			X a	
Dunlin		X a			X a	
Black-tailed godwit		X a			X a	
Common redshank		X a			X a	
Common shelduck		X a			X a	
Bar-tailed godwit		X a			X a	

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI alone or in-combination.

End of Matrix 15

Matrix 16: Humber Estuary SPA

Name of designated site:	Humber Estuary SPA					
Site Code:	UK9006111					
Closest Distance to Project	54.0 km to Array Area / 54.0 km to ~~array~~~~Array (WTG)~~WTG area / 12.5~~1~~ km to ECC / 47.5 km to ANS / 20.9~~18.2~~ km to biogenic reef / 18.76~~5.3~~ km to ORCP					
Likely Effects of Project						
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	D	O	D	C	O	D
Avocet		X a			X a	
Bar-tailed godwit		X a			X a	
Bittern		X a			X a	
Black-tailed godwit		X a			X a	
Dunlin		X a			X a	
Golden plover		X a			X a	
Hen harrier		X a			X a	
Knot		X a			X a	
Little tern		X a			X a	
Marsh harrier		X a			X a	
Redshank		X a			X a	
Ruff		X a			X a	
Shelduck		X a			X a	
~~Pink-footed goose~~		~~X a~~			~~X a~~	
Wigeon		X a			X a	
Ringed plover		X a			X a	
Curlew		X a			X a	
Sanderling		X a			X a	
Oystercatcher		X a			X a	
Dark-bellied brent goose		X a			X a	
Mallard		X a			X a	
Pochard		X a			X a	
Goldeneye		X a			X a	
Scaup		X a			X a	

Evidence supporting conclusions

X a With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI alone or in-combination.

End of Matrix 16

Matrix 17: North Norfolk Coast SPA

Name of designated site:	North Norfolk Coast SPA					
Site Code:	UK9009031					
Closest Distance to Project	56.4 km to Array Area / 56.4~~57.2~~ km to ~~array~~~~Array (WTG)~~WTG area / 29.9 km to ECC / 59.0 km to ANS / 16.0~~0.8~~ km to biogenic reef / 31.4 km to ORCP					
Likely Effects of Project						
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	D	O	D	C	O	D
Dark-bellied brent goose		Xa			Xa	
Eurasian marsh harrier		Xa			Xa	
Eurasian wigeon		Xa			Xa	
Great bittern		Xa			Xa	
Pied avocet		Xa			Xa	
Pink-footed goose		Xa			Xa	
Red knot		Xa			Xa	
Sandwich tern		Xa			Xa	
Common tern		Xa			Xa	
Little tern		Xa			Xa	
Assemblage features		Xa			Xa	

Evidence supporting conclusions

Xa	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI alone or in-combination.

End of Matrix 17

Matrix 18: Gibraltar Point Ramsar

Name of designated site:	Gibraltar Point Ramsar					
Site Code:	UK11027 (589)					
Closest Distance to Project	62.9 km to Array Area / 62.9~~3.1~~ km to ~~array~~~~Array (WTG)~~WTG area / 13.4~~3~~ km to ECC / 70.6~~5~~ km to ANS / 11.7~~.6~~ km to biogenic reef / 19.3 km to ORCP					
Likely Effects of Project						
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D
Grey plover		X a			X a	
Sanderling		X a			X a	
Dark-bellied brent goose		X a			X a	
Bar-tailed godwit		X a			X a	

Evidence supporting conclusions

X a With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI alone or in-combination.

End of Matrix 18

Matrix 19: Gibraltar Point SPA

Name of designated site: Site Code: Closest Distance to Project Likely Effects of Project	Gibraltar Point SPA UK9008022 62.9 km to Array Area / 62.93~~.1~~ km to ~~array~~~~Array (WTG)~~WTG area / 13.43 km to ECC / 70.65 km to ANS / 11.76 km to biogenic reef / 19.3 km to ORCP					
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D
Grey plover		Xa			Xa	
Sanderling		Xa			Xa	
Little Tern		Xa			Xa	
Bar-tailed godwit		Xa			Xa	

Evidence supporting conclusions

Xa	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI alone or in-combination.

End of Matrix 19

Matrix 20: The Wash Ramsar

Name of designated site:	The Wash Ramsar					
Site Code:	UK11072 (395)					
Closest Distance to Project	66.35 km to ~~array~~Array Area / 16.54 km to ECC / 74.0 km to ANS / 13.8 km to biogenic reef / 22.87 km to ORCP					
Likely Effects of Project						
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D
Eurasian oystercatcher		X a			X a	
Grey plover		X a			X a	
Golden plover		X a			X a	
Red knot		X a			X a	
Sanderling		X a			X a	
Eurasian curlew		X a			X a	
Common redshank		X a			X a	
Ruddy turnstone		X a			X a	
Pink-footed goose		X a			X a	
Dark-bellied brent goose		X a			X a	
Common shelduck		X a			X a	
Northern pintail		X a			X a	
Northern lapwing		X a			X a	
Dunlin		X a			X a	
Bar-tailed godwit		X a			X a	

Evidence supporting conclusions

X a	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI alone or in-combination.

End of Matrix 21

Matrix 21: The Wash SPA

Name of designated site:	The Wash SPA
Site Code:	UK9008021
Closest Distance to Project	66.35 ~~km to array~~Array Area / 66.3 km to ~~Array (WTG)~~WTG area / 16.54 ~~km to ECC / 74.0 km to ANS / 13.8 km to biogenic reef / 22.87 km to ORCP~~
Likely Effects of Project	

Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D
Bar-tailed godwit		X a			X a	
Common scoter		X a			X a	
Black-tailed godwit		X a			X a	
Common goldeneye		X a			X a	
Common redshank		X a			X a	
Common shelduck		X a			X a	
Dark-bellied brent goose		X a			X a	
Dunlin		X a			X a	
Eurasian curlew		X a			X a	
Eurasian oystercatcher		X a			X a	
Eurasian wigeon		X a			X a	
Gadwall		X a			X a	
Grey plover		X a			X a	
Northern pintail		X a			X a	
Pink-footed goose		X a			X a	
Red knot		X a			X a	
Ruddy turnstone		X a			X a	
Sanderling		X a			X a	
Tundra swan		X a			X a	
Common tern		X a			X a	
Little tern		X a			X a	
Assemblage features		X a			X a	

Evidence supporting conclusions

X a With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI alone or in-combination.

End of Matrix 21

Matrix 22: Flamborough and Filey Coast SPA

Name of designated site: Site Code: Closest Distance to Project Likely Effects of Project	Flamborough and Filey Coast SPA UK9006101 93.5 km to Array Area / 93.5~~93.5~~ km to ~~array~~~~Array (WTG)~~WTG area / 95.9~~2.0~~ km to ECC / 70.7~~0.4~~ km to ANS / 92.7~~88.8~~ km to biogenic reef / 97.3~~2.0~~ km to ORCP											
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake								Xa			✓d	
Gannet		Xa			Xa			Xa			Xb	
Herring gull								Xa			Xb	
Guillemot	Xa	Xa	Xa	Xa	Xa	Xa		Xa		Xb	Xb	Xb
Razorbill	Xa	Xa	Xa	Xa	Xa	Xa		Xa		Xb	Xc	Xb
Puffin	Xa	Xa	Xa	Xa	Xa	Xa		Xa		Xb	Xb	Xb

Evidence supporting conclusions

Xa	With consideration of the low impact of the proposed development concluding that there will be negligible impact on baseline levels of population or mortality we have concluded no AEoI. The feature will be maintained in the long term.
Xb	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.
Xc	Although numbers are modelled to have a >1% impact on mortality, with consideration of baseline growth figures and variation we conclude this does not have the potential to negatively impact the feature in-combination.
✓d	With consideration of the predicted mortalities in-combination being 383 birds per annum, we cannot rule out adverse effects on the integrity of the feature at this designated site.

End of Matrix 22

Matrix 23: Alde-Ore Estuary Ramsar

Name of designated site:	Alde-Ore Estuary Ramsar					
Site Code:	UK11002 (862)					
Closest Distance to Project	147.3 km to Array Area / 147.34 km to ~~array~~~~Array (WTG)~~WTG area -/ 131.43 km to ECC / 136.2 km to ANS / 1120.64 km to biogenic reef / 139.2 km to ORCP					
Likely Effects of Project						
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D
Lesser black-backed gull		X a			X b	

Evidence supporting conclusions

X a With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.

X b With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 23

Matrix 24: Alde-Ore Estuary SPA

Name of designated site:	Alde-Ore Estuary SPA					
Site Code:	UK9009112					
Closest Distance to Project	147.3 km to Array Area / 147.3 km to ~~Array (WTG)~~WTG area / 131.4 km to ECC / 136.2 km to ANS / 112.6 km to biogenic reef / 139.2 km to ORCP~~147.2 km to array / 131.3 km to ECC / 136.2 km to ANS / 110.4 km to biogenic reef / 139.2 km to ORCP~~					
Likely Effects of Project						
Effect	Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D
Lesser black-backed gull		X a			X b	

Evidence supporting conclusions

X a	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 24

Matrix 25: Coquet Island SPA

Name of designated site:	Coquet Island SPA								
Site Code:	UK9006031								
Closest Distance to Project	258.6 km to Array Area / 258.~~86~~ km to ~~array~~~~Array (WTG)~~WTG area / 260.9~~58.8~~ km to ECC / 233.9~~1.0~~ km to ANS / 2596.~~83~~ km to biogenic reef / 263.9~~58.8~~ km to ORCP								
Likely Effects of Project									
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D
Puffin	X a	X a	X a	X a	X a	X a	X b	X b	X b
Sandwich tern								X b	
Common Tern								X b	

Evidence supporting conclusions

X a	With consideration of the low impact of the proposed development concluding that there will not be a significant impact on baseline levels of population or mortality we have concluded no AEoI.
X b	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 25

Matrix 26: Farne Islands SPA

Name of designated site:	Farne Islands SPA
Site Code:	UK9006021
Closest Distance to Project	285.8 km to Array Area / 2865.48 km to ~~array~~Array ~~(WTG)~~WTG area / 291.789.1 km to ECC / 261.357.9 km to ANS / 289.75.9 km to biogenic reef / 294.289.1 km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Kittiwake								X a			X c	
Sandwich tern								X a			X c	
Common guillemot	X b	X b	X b	X b	X b	X b				X c	X c	
Puffin	X b	X b	X b	X b	X b	X b				X c	X c	

Evidence supporting conclusions

X a	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that there will not be a significant impact on baseline levels of population or mortality we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 26

Matrix 27: Forth Islands SPA

Name of designated site:	Forth Islands SPA											
Site Code:	UK9004171											
Closest Distance to Project	363.5 km to Array Area / 363.8 km to ~~Array (WTG)~~WTG area / 364.7 km to ECC / 338.8 km to ANS / 364.4 km to biogenic reef / 368.2 km to ORCP~~363.7 km to array / 363.4 km to ECC / 335.9 km to ANS / 361.2 km to biogenic reef / 363.4 km to ORCP~~											
Likely Effects of Project												
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Gannet								X a		X b	X b	X b

Evidence supporting conclusions

X a	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 27

Matrix 28: Buchan Ness to Collieston Coast SPA

Name of designated site:	Buchan Ness to Collieston Coast SPA											
Site Code:	UK9002491~~UK9004171~~											
Closest Distance to Project	456.5 km to Array Area / 458.7 ~~6.58~~ km to ~~array~~Array ~~(WTG)~~\WTG area / 471.8~~69.78~~ km to ECC / 433.7~~78~~ km to ANS / 469.6 ~~4.79~~ km to biogenic reef / 475.2~~69.78~~ km to ORCP											
Likely Effects of Project												
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	✗b	✗b	✗b	✗b	✗b	✗b				✗c	✗c	✗c
Kittiwake								✗a		✗c	✗c	✗c

Evidence supporting conclusions

✗a	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
✗b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
✗c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 28

Matrix 29: Calf of Eday SPA

Name of designated site:	Calf of Eday SPA
Site Code:	UK9002431~~UK9004171~~
Closest Distance to Project	667.0 km to Array Area / 669.7~~7.13~~ km to ~~array~~~~Array (WTG)~~WTG area / 682.2~~41~~ km to ECC / 645.02 ~~0~~ km to ANS / 683.0~~77.99~~ km to biogenic reef / 688.9~~3.51~~ km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 29

Matrix 30: Copinsay SPA

Name of designated site:	Copinsay SPA~~alf of Eday SPA~~											
Site Code:	UK9002151~~UK9004171~~											
Closest Distance to Project	630.7~~0.89~~ km to ~~array~~Array Area /633.4 to ~~Array (WTG)~~WTG area / 646.0~~18~~ km to ECC / 608.~~76 8~~ km to ANS / 646.1~~1.18~~ km to biogenic reef / 651.6~~46.57~~ km to ORCP											
Likely Effects of Project												
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 31

Matrix 31: East Caithness Cliffs SPA

Name of designated site:	East Caithness Cliffs SPA
Site Code:	UK9001182
Closest Distance to Project	582.2 km to Array Area / 583.8 ~~4.60~~ km to ~~array~~Array WTG / 593.9~~3.17~~ km to ECC / 558.6~~61.04~~ km to ANS / 591.0~~89.27~~ km to biogenic reef / 595.9~~3.17~~ km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc
Razorbill	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 31

Matrix 32: Fair Isle SPA

Name of designated site:	Fair Isle SPA											
Site Code:	UK9002091											
Closest Distance to Project	675.3 km to Array Area / 678.~~064~~ km to ~~array~~~~Array (WTG)~~WTG area / 690.0~~3.43~~ km to ECC / 654.7~~58.03~~ km to ANS / 695.1~~3.26~~ km to biogenic reef / 702.3 ~~699.76~~ km to ORCP											
Likely Effects of Project												
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c
Razorbill	X b	X b	X b	X b	X b	X b				X c	X c	X c
Puffin	X b	X b	X b	X b	X b	X b				X c	X c	X c
Gannet								X a		X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 32

Matrix 33: Foula SPA

Name of designated site:	Foula SPA
Site Code:	UK900206144171
Closest Distance to Project	749.6673 km to arrayArray Area / 749.5 km to Array (WTG)WTG area / 761.552 km to ECC / 726.008 km to ANS / 766.1 1.20 km to biogenic reef / 773.2667.64 km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc
Razorbill	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Puffin	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 33

Matrix 34: Fowlsheugh SPA

Name of designated site:	Fowlsheugh SPA
Site Code:	UK9002271
Closest Distance to Project	421.4~~1.52~~ km to ~~array~~Array Area / 423.1 km to Arry (WTG) / 434.6~~0.91~~ km to ECC / 397.9 ~~7.98~~ km to ANS / 431.1~~26.70~~ km to biogenic reef / 436.2~~0.91~~ km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c
Razorbill	X b	X b	X b	X b	X b	X b				X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 34

Matrix 35: Hermaness, Saxa, Vord and Valla Field SPA

Name of designated site:	Hermaness, Saxa, Vord and Valla Field SPA
Site Code:	UK9002011
Closest Distance to Project	80020.100 km to ~~array~~Array Area / 802.2 km to ~~Array (WTG)~~WTG area / 814.762 km to ECC / 781.879 km to ANS / 823.819.29 km to biogenic reef / 83223.326.58 km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc
Puffin	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Gannet								Xa		Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 35

Matrix 36: Hoy SPA

Name of designated site:	Hoy SPA
Site Code:	UK9002141
Closest Distance to Project	634.67.50 km to arrayArray Area / 636.950.1 km to Array Area (WTG) / 649.9 2 km to ECC / 611.8 4.71 km to ANS / 6475.338 km to biogenic reef / 652.70.12 km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc
Puffin	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 36

Matrix 37: Marwick Head SPA

Name of designated site:	Marwick Head SPA											
Site Code:	UK9002121											
Closest Distance to Project	670.10~~.39~~ km to ~~array~~Array Area / 672.5 km to ~~Array (WTG)~~WTG area / 685.4~~3.89~~ km to ECC / 647.5~~80~~ km to ANS / 683.5~~78.98~~ km to biogenic reef / 689.1~~3.89~~ km to ORCP											
Likely Effects of Project												
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 37

Matrix 38: North Caithness Cliffs SPA

Name of designated site:	North Caithness Cliffs SPA											
Site Code:	UK9001181											
Closest Distance to Project	610.2~~593.32~~ km to ~~array~~Array Area / 612.5 km to ~~Array (WTG)~~WTG area / 625.4~~00.07~~ km to ECC / 587.4~~69.48~~ km to ANS / 623.1~~596.58~~ km to biogenic reef / 628.6~~00.07~~ km to ORCP											
Likely Effects of Project												
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	✗b	✗b	✗b	✗b	✗b	✗b				✗c	✗c	✗c
Kittiwake								✗a		✗c	✗c	✗c
Puffin	✗b	✗b	✗b	✗b	✗b	✗b				✗c	✗c	✗c
Razorbill	✗b	✗b	✗b	✗b	✗b	✗b				✗c	✗c	✗c

Evidence supporting conclusions

✗a With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.

✗b With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.

✗c With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 38

Matrix 39: Noss SPA

Name of designated site:	Noss SPA											
Site Code:	UK9002081											
Closest Distance to Project	734.5~~4.45~~ km to ~~array~~Array Area / 736.6 km to ~~Array (WTG)~~WTG area / 749.0~~8.97~~ km to ECC / 715.64 km to ANS / 757.3~~2.72~~ km to biogenic reef / 765.6~~59.89~~ km to ORCP											
Likely Effects of Project												
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c
Puffin	X b	X b	X b	X b	X b	X b				X c	X c	X c
Gannet								X a		X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 39

~~Matrix 40: Rousay SPA~~

~~Name of designated site:~~ ~~Site Code:~~ ~~Closest Distance to Project~~ ~~Likely Effects of Project~~	~~Noss SPA~~ ~~UK9004171~~ ~~670.667.99 km to arrayArray Area / 683.316 km to ECC / 645.878 km to ANS / 683.077.90 km to biogenic reef / 688.23.16 km to ORCP~~											
~~Effect~~	~~Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones~~			~~Direct disturbance and displacement due to the presence of turbines~~			~~Collision risk due to the presence of turbines~~			~~In-combination~~		
~~Stage of Development~~	~~C~~	~~O~~	~~D~~	~~C~~	~~O~~	~~D~~	~~C~~	~~O~~	~~D~~	~~C~~	~~O~~	~~D~~
~~Guillemot~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~	~~X b~~				~~X c~~	~~X c~~	~~X c~~
~~Kittiwake~~								~~X a~~		~~X c~~	~~X c~~	~~X c~~

Matrix 40: Rousay SPA

Name of designated site: Site Code: Closest Distance to Project Likely Effects of Project	Noss SPA UK9004171 670.6 km to Array Area / 683.3 km to ECC / 645.8 km to ANS / 683.0 km to biogenic reef / 688.2 km to ORCP											
Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 40

Matrix 41~~0~~: St Abb's Head to Fast Castle SPA

Name of designated site:	St Abb's Head to Fast Castle SPA
Site Code:	UK900427~~12511~~
Closest Distance to Project	329.8 km to Array Area / 330.3~~29.88~~ km to ~~array~~~~Array (WTG)~~WTG area / 3331.5~~62~~ km to ECC / 305.2~~30~~ km to ANS / 332.4~~28.85~~ km to biogenic reef / 336.51~~.52~~ km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c
Razorbill	X b	X b	X b	X b	X b	X b				X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 41~~0~~

Matrix 4241: Sumburgh Head SPA

Name of designated site:	Sumburgh Head SPA
Site Code:	UK9002511
Closest Distance to Project	707.7 km to Array Area / 709.87.69 km to arrayArray (WTG)WTG area / 7272.103 km to ECC / 687.9 7.95 km to ANS / 729.04.28 km to biogenic reef / 731.26.80 km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 421

Matrix 4~~2~~3: Troup, Pennan and Lion's Head SPA

Name of designated site:	Troup, Pennan and Lion's Head SPA
Site Code:	UK9002471
Closest Distance to Project	498.3 km to Array Area / 500.6 ~~498.36~~ km to ~~array~~~~Array (WTG)~~WTG area ~~-~~/ 513.1.75 ~~7~~ km to ECC / 475.57~~65~~ km to ANS / 511.506.77 ~~km to biogenic reef / 517.11.77~~ km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc
Razorbill	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 4~~3~~2

Matrix 4~~34~~: West Westray SPA

Name of designated site:	West Westray SPA
Site Code:	UK9002101
Closest Distance to Project	678.3 km to Array Area / 681.0~~78.53~~ km to ~~array~~~~Array (WTG)~~WTG area / 693.681 ~~4~~km to ECC / 656.1 ~~36~~ km to ANS / 693.4~~88.58~~ km to biogenic reef / 699.23~~.88~~ km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	X b	X b	X b	X b	X b	X b				X c	X c	X c
Kittiwake								X a		X c	X c	X c
Razorbill	X b	X b	X b	X b	X b	X b				X c	X c	X c

Evidence supporting conclusions

X a	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
X b	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
X c	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 4~~3~~

Matrix 454: Rousay SPA

Name of designated site:	Rousay SPA
Site Code:	UK9002371~~8573~~
Closest Distance to Project	667.8 km to Array Area / 67~~68.~~0.4 km to ~~array~~~~Array (WTG)~~WTG area / 683.1~~.2~~ km to ECC / 645.5~~8~~ km to ANS / 682.7~~77.9~~ km to biogenic reef / 68~~3~~.8.4~~2~~ km to ORCP
Likely Effects of Project	

Effect	Direct disturbance and displacement due to work activity and vessel movements in both the offshore and intertidal zones			Direct disturbance and displacement due to the presence of turbines			Collision risk due to the presence of turbines			In-combination		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Guillemot	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc
Kittiwake								Xa		Xc	Xc	Xc
Razorbill	Xb	Xb	Xb	Xb	Xb	Xb				Xc	Xc	Xc

Evidence supporting conclusions

Xa	With consideration of the significant projected low impact of collision risk on migratory species we conclude this impact will have no impact on baseline mortality and therefore no AEoI.
Xb	With consideration of the low impact of the proposed development concluding that any impact on baseline levels of population or mortality will be indistinguishable from natural fluctuations we have concluded no AEoI.
Xc	With consideration that the assessment alone concluded indistinguishable impact compared to natural fluctuations in population and mortality we conclude no potential for AEoI from in-combination impacts.

End of Matrix 454

3.4 Sites designated with migratory fish features

Matrix 4~~6~~5: Humber Estuary SAC

Name of designated site:	Humber Estuary SAC					
Site Code:	UK0030170					
Closest Distance to Project	54.4 km to ~~array~~Array Area / 54.4 km to ~~Array (WTG)~~WTG area / 18.~~95~~95 ~~5~~ km to ECC / 47.5 km to ANS / 24.3~~23.8~~ km to biogenic reef / 23.8 ~~19.7km~~ km to ORCP					
Likely Effects of Project						
Effect	Underwater noise			In-combination effects		
Stage of Development	C	O	D	C	O	D
Sea lamprey	X a	X a	X a	X b	X b	X b
River lamprey	X a	X a	X a	X b	X b	X b

Evidence supporting conclusions

X a Due to the transient nature and low sensitivity of this species, and the highly localised nature of the effects it has been concluded that there is no potential for AEoI.

X b Of the project identified in-combination, none are anticipated to have significant interactions with the Project (no overlap of PTS or TTS impact ranges) and any potential impacts on behaviour are intermittent, temporary and of low risk to the species given their lack of a swim bladder. Therefore, there is no potential for AEoI in-combination.

End of Matrix 4~~6~~5

3.5 Sites Designated with Onshore Ecology Features

Matrix 47~~6~~: Humber Estuary SPA

Name of Designated Site:	Humber Estuary SPA								
Site Code:	UK9006111								
Closest Distance to Project:	54.0 km to Array Area / 54.0 km to ~~array~~~~Array (WTG)~~WTG area / 12.5 km to onshore ECC / 47.5~~15.3~~ km to ANS / 20.9~~47.5~~ km to biogenic reef / 18.7~~18.2~~ km to ORCP								
Likely Effects of Project									
Effect	Risk of Disturbance			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of Pollution		
Stage of Development	C	O	D	C	O	D	C	O	D
Great bittern	✗c	✗c	✗c	✗b	✗b	✗b	✗e	✗d	✗e
Common shelduck							✗e	✗d	✗e
Eurasian marsh harrier	✗a	✗c	✗a	✗a	✗b	✗a	✗e	✗d	✗e
Hen harrier							✗e	✗d	✗e
Pied avocet	✗c	✗c	✗c	✗a	✗b	✗a	✗e	✗d	✗e
European golden plover	✗a	✗c	✗a	✗a	✗b	✗a	✗e	✗d	✗e
Red knot							✗e	✗d	✗e
Dunlin	✗a	✗c	✗a	✗b	✗b	✗b	✗e	✗d	✗e
Ruff							✗e	✗d	✗e
Black-tailed godwit							✗e	✗d	✗e
Bar-tailed godwit							✗e	✗d	✗e
Common redshank	✗a	✗c	✗a	✗a	✗b	✗a	✗e	✗d	✗e
Little tern	✗b	✗c	✗b	✗b	✗b	✗b	✗e	✗d	✗e
Waterbird assemblage	✗a	✗c	✗a	✗b	✗b	✗b	✗e	✗d	✗e

Evidence supporting conclusions

✗a	It has been concluded that any potential habitat loss and/ or disturbance will not undermine the conservation objectives for this species and designated site and there is therefore no AEoI.
✗b	There will be no loss of habitat or disturbance for this species due to the nature of activities and/ or distance and therefore no AEoI from this effect.
✗c	With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.
✗d	Given the nature and the frequency of works, there is not the potential for AEoI.
✗e	With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.

End of Matrix 47~~6~~

Matrix 4~~8~~7: Humber Estuary Ramsar Site

Name of designated site:	Humber Estuary Ramsar Site
Site Code:	UK11031 (663)
Closest Distance to Project	54.0 km to Array Area / 54.0 km to ~~Array (WTG)~~WTG area / 12.5 km to onshore ECC / 47.5 km to ANS / 20.9 km to biogenic reef / 18.7 km to ORCP~~54.0 km to array / 12.5 km to ECC / 15.3 km to ANS / 47.5 km to biogenic reef / 18.2 km to ORCP~~
Likely Effects of Project	

Effect	Risk of disturbance			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D
Criterion 5 – assemblages of international importance (waterfowl, non-breeding season);	X a	X c	X a	X a	X b	X a	X e	X d	X e
Criterion 6 – species/ populations occurring at levels of international importance	X a	X c	X a	X a	X b	X a	X e	X d	X e
Common shelduck							X e	X d	X e
Eurasian golden plover	X a	X c	X a	X a	X b	X a	X e	X d	X e
Red knot							X e	X d	X e
Dunlin	X a	X c	X a	X b	X b	X b	X e	X d	X e
Black-tailed godwit							X e	X d	X e
Bar-tailed godwit							X e	X d	X e
Common redshank	X a	X c	X a	X a	X b	X a	X e	X d	X e

Evidence supporting conclusions

X a	It has been concluded that any potential habitat loss and/or disturbance will not undermine the conservation objectives for this species and designated site and there is therefore no AEoI.
X b	There will be no loss of habitat or disturbance for this species due to the nature of activities and/ or distance and therefore no AEoI from this effect.
X c	With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.
X d	Given the nature and the frequency of works, there is not the potential for AEoI.
X e	With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.

End of Matrix 4~~8~~7

Matrix 4~~9~~8: Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC

Name of designated site:	Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC
Site Code:	UK0030270
Closest Distance to Project	54.5 km to Array Area / 54.~~5~~4 km to ~~array~~Array ~~(WTG)~~WTG area / ~~11.9~~11.9 ~~4~~4.15 km to onshore ECC / 51.5~~15.5~~ km to ANS / 11.4~~51.5~~ km to biogenic reef / 18.0~~.6~~ km to ORCP
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats			Risk of disturbance			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D
Embryonic shifting dunes	X a	X a	X a	X a		X a	X e	X b	X e
Shifting dunes along the shoreline with *Ammophila arenaria* (""white dunes"")	X a	X a	X a	X a		X a	X e	X b	X e
Fixed coastal dunes with herbaceous vegetation (""grey dunes"")	X a	X a	X a	X a		X a	X e	X b	X e
Dunes with *Hippophae rhamnoides*	X a	X a	X a	X a		X a	X e	X b	X e
Humid dune slacks	X a	X a	X a	X a		X a	X e	X b	X e

Evidence supporting conclusions

X a	There will be no loss of habitat or disturbance for this feature due to the nature of activities and/ or distance and therefore no AEoI from this effect.
X b	Given the nature and the frequency of works, there is not the potential for AEoI.
X e	With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.

End of Matrix 4~~9~~8

Matrix 50~~49~~: The Wash SPA

Name of designated site:	The Wash SPA
Site Code:	UK9008021
Closest Distance to Project	66.3 km to Array Area / 66.3 km to ~~array~~Array ~~(WTG)~~WTG area / ~~16.5~~0.18 km to onshore ECC / 74.0~~22.7~~ km to ANS / 13.8~~74.0~~ km to biogenic reef / 22.8~~3.8~~ km to ORCP
Likely Effects of Project	

Effect	Risk of disturbance/displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D
Bewick's swan							X d		X d
Pink-footed goose	X a	X c	X a	X a			X d		X d
Dark-bellied brent goose	X c	X c	X c	X a			X d		X d
Common shelduck							X d		X d
Eurasian wigeon	X a	X c	X a	X a			X d		X d
Gadwall	X a	X c	X a	X b			X d		X d
Northern pintail							X d		X d
Black (common) scoter	X a	X c	X a	X b			X d		X d
Common goldeneye							X d		X d
Eurasian oystercatcher	X a	X c	X a	X a			X d		X d
Grey plover							X d		X d
Red knot							X d		X d
Sanderling	X a	X c	X a	X b			X d		X d
Dunlin	X a	X c	X a	X b			X d		X d
Black-tailed godwit							X d		X d
Bar-tailed godwit							X d		X d
Eurasian curlew	X a	X c	X a	X a			X d		X d
Common redshank	X a	X c	X a	X a			X d		X d
Ruddy turnstone							X d		X d
Common tern	X a	X c	X a	X b			X d		X d
Little tern	X b	X c	X b	X b			X d		X d
Waterbird assemblage	X a	X c	X a	X b			X d		X d

Evidence supporting conclusions

X a	It has been concluded that any potential habitat loss and/ or disturbance will not undermine the conservation objectives for this species and designated site and there is therefore no AEoI.
X b	There will be no loss of habitat or disturbance for this species due to the nature of activities and/or distance and therefore no AEoI from this effect.
X c	With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.
X d	With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.

End of Matrix 5049

Matrix 5~~10~~: The Wash RAMSAR site

Name of designated site:	The Wash RAMSAR Site
Site Code:	UK11072 (395)
Closest Distance to Project	66.3 km to Array Area / 66.3 km to ~~Array (WTG)~~WTG area / ~~16.5~~0.18 km to onshore ECC / 74.0 km to ANS / 13.8 km to biogenic reef / 22.8 km to ORCP~~66.3 km to array / 16.5 km to ECC / 22.7 km to ANS / 74.0 km to biogenic reef / 3.8 km to ORCP~~
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats			Risk of disturbance/displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Criterion 1 – Saltmarshes, major intertidal banks of sand and mud, shallow water, and deep channels	Xa			Xa	Xa	Xa	Xa			Xb		Xb
Criterion 3 – Inter-relationship between saltmarshes, intertidal sand, mudflats, and estuarine waters	Xa			Xa	Xa	Xa	Xa			Xb		Xb
Criterion 5 – Bird assemblages of international importance				Xc	Xd	Xc	Xa			Xb		Xb
Criterion 6 – Bird species/ populations occurring at levels of international importance				Xc	Xd	Xc	Xa			Xb		Xb
Common redshank				Xc	Xd	Xc	Xc			Xb		Xb
Eurasian curlew				Xc	Xd	Xc	Xc			Xb		Xb
Eurasian oystercatcher				Xc	Xd	Xc	Xc			Xb		Xb
Grey plover										Xb		Xb
Red knot										Xb		Xb
Sanderling				Xc	Xd	Xc	Xa			Xb		Xb
Black-headed gull				Xc	Xd	Xc	Xc			Xb		Xb
Common eider										Xb		Xb
Bar-tailed godwit										Xb		Xb
Common shelduck										Xb		Xb
Dark-bellied brent goose				Xd	Xd	Xd	Xc			Xb		Xb
Dunlin				Xc	Xd	Xc	Xa			Xb		Xb
Pink-footed goose				Xa	Xd	Xa	Xc			Xb		Xb

Evidence supporting conclusions

Xa	There will be no loss of habitat or disturbance for this feature due to the nature of activities and/ or distance and therefore no AEoI from this effect.
Xb	With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.
Xc	It has been concluded that any potential habitat loss and/or of the disturbance will not undermine the conservation objectives for this species and designated site and there is therefore no AEoI.
Xd	With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.

End of Matrix 5~~10~~

Matrix 5~~1~~2: The Wash & North Norfolk Coast SAC

Name of designated site:	The Wash & North Norfolk Coast SAC
Site Code:	UK0017075
Closest Distance to Project	47.8 km to Array Area / 47.8 km to ~~array~~~~Array (WTG)~~WTG area / ~~13.4~~ 0.18 km to onshore ECC / 50.5 ~~19.3~~ km to ANS / 8.7~~50.4~~ km to biogenic reef / 19.3~~0.0~~ km to ORCP
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats, reduction of habitat quality.			Risk of disturbance			Displacement of otter and reduction of otter habitat		
Stage of Development	C	O	D	C	O	D	C	O	D
Atlantic salt meadows	Xa	Xa	Xa	Xa		Xa			
Mediterranean and thermo-Atlantic halophilous scrubs	Xa	Xa	Xa	Xa		Xa			
Coastal lagoons	Xa	Xa	Xa	Xa		Xa			
Otter				Xc	Xb	Xc	Xa		Xa

Evidence supporting conclusions

Xa	There will be no loss of habitat or disturbance for this feature due to the nature of activities and/ or distance and therefore no AEoI from this effect.
Xb	Given the nature and the frequency of works, there is not the potential for AEoI.
Xc	With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.

End of Matrix 5~~2~~1

Matrix 5~~3~~2: Greater Wash SPA

Name of designated site:	Greater Wash SPA
Site Code:	UK9020329
Closest Distance to Project	24.8 km to Array Area / 24.8~~6~~ km to ~~array~~Array ~~(WTG)~~WTG area / 0.0 km to onshore ECC / 24.0~~0.0~~ km to ANS / 0.0~~24.0~~ km to biogenic reef / 0.0 km to ORCP
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats, reduction of habitat quality.			Risk of disturbance/displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Sandwich tern	X a			X a	X c	X a	X a			X b		X b
Common tern	X a			X a	X c	X a	X a			X b		X b
Little tern	X a			X a	X c	X a	X a			X b		X b

Evidence supporting conclusions

X a There will be no loss of habitat or disturbance for this species due to the nature of activities and/ or distance and therefore no AEoI from this effect.

X b With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.

X c With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.

End of Matrix 5~~3~~2

Matrix 5~~43~~: Gibraltar Point SPA

Name of designated site:	Gibraltar Point SPA
Site Code:	UK9008022
Closest Distance to Project	62.9 km to Array Area / 62.9 km to ~~array~~~~Array (WTG)~~WTG area / ~~13.4~~4.15 km to onshore ECC / 70.6~~19.3~~ km to ANS / 11.7~~70.5~~ km to biogenic reef / 19.3~~.6~~ km to ORCP
Likely Effects of Project	

Effect	Risk of disturbance/displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D
Grey plover							Xb		Xb
Sanderling	Xa	Xc	Xa	Xa			Xb		Xb
Bar-tailed godwit							Xb		Xb
Little tern	Xa	Xc	Xa	Xa			Xb		Xb

Evidence supporting conclusions

Xa	There will be no loss of habitat or disturbance for this feature due to the nature of activities and/ or distance and therefore no AEoI from this effect.
Xb	With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.
Xc	With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.

End of Matrix 5~~43~~

Matrix 554: Gibraltar Point RAMSAR

Name of designated site:	Gibraltar Point Ramsar Site
Site Code:	UK11027 (589)
Closest Distance to Project	62.9 km to Array Area / 62.9 km to ~~Array (WTG)~~WTG area / ~~13.44~~.15 km to onshore ECC / 70.6 km to ANS / 11.7 km to biogenic reef / 19.3 km to ORCP~~62.8 km to array / 13.4 km to ECC / 19.3 km to ANS / 70.5 km to biogenic reef / 1.6 km to ORCP~~
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats, reduction of habitat quality.			Risk of disturbance			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure, Loss of or decline in populations of scarce invertebrates and plants			Risk of pollution		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Ramsar criterion 1: Coastal habitats – estuarine mudflats, sandbanks, and saltmarsh	Xa		Xa	Xa	Xa	Xa				Xb		Xb
Ramsar criterion 2: Red Data book invertebrates				Xa	Xa	Xa	Xa			Xb		Xb
Notable plant species				Xa	Xa	Xa	Xa			Xb		Xb
Ramsar criterion 5: Waterfowl				Xa	Xc	Xa	Xa			Xb		Xb
Ramsar criterion 6: Grey plover, sanderling, bar-tailed godwit, dark-bellied brent goose				Xa	Xc	Xa	Xa			Xb		Xb

Evidence supporting conclusions

Xa	There will be no loss of habitat or disturbance for this feature due to the nature of activities and/ or distance and therefore no AEoI from this effect.
Xb	With the embedded mitigation measures, there would be no AEoI on any of the identified designated sites in relation to hydrological impacts from the Project alone.
Xc	With consideration of mitigation, and that disturbance will be localised and temporary it has been concluded that there is no potential for AEoI for this species and effect.

End of Matrix 554

Matrix 5~~65~~:: North Norfolk Coast SPA

Name of designated site:	North Norfolk SPA
Site Code:	UK9009031
Closest Distance to Project	56.4 km to Array Area / 56.4 km to ~~array~~~~Array (WTG)~~WTG area / ~~29.9~~24 km to onshore ECC / 59.0 ~~31.4~~ km to ANS / 16.0~~59.0~~ km to biogenic reef / 31.4~~10.8~~ km to ORCP
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats, reduction of habitat quality.			Risk of disturbance/displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure.			Risk of pollution			Displacement of otter and reduction of otter habitat		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Pink-footed goose				Xa	Xa	Xa	Xa								

Evidence supporting conclusions

Xa It has been concluded that any potential habitat loss and/or of the disturbance will not undermine the conservation objectives for this species and designated site and there is therefore no AEoI.

End of Matrix 5~~65~~

Matrix 5~~7~~6: North Norfolk Coast RAMSAR

Name of designated site:	North Norfolk RAMSAR
Site Code:	76
Closest Distance to Project	56.4 km to Array Area / 56.4 km to ~~Array (WTG)~~WTG area / ~~29.9~~24 km to onshore ECC / 59.0 km to ANS / 16.0 km to biogenic reef / 31.4 km to ORCP~~56.4 km to array / 29.9 km to ECC / 31.3 km to ANS / 59.0 km to biogenic reef / 10.8 km to ORCP~~
Likely Effects of Project	

Effect	Risk of loss of or damage to habitats, reduction of habitat quality.			Risk of disturbance/displacement			Loss of foraging, roosting and nesting habitat for birds inside and outside the SPA depending on location of the above ground infrastructure.			Risk of pollution			Displacement of otter and reduction of otter habitat		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Pink-footed goose				X a	X a	X a	X a								

Evidence supporting conclusions

X a It has been concluded that any potential habitat loss and/or of the disturbance will not undermine the conservation objectives for this species and designated site and there is therefore no AEoI.

End of Matrix 5~~7~~6