

Norfolk Vanguard Offshore Wind Farm

Appendix 12.3

Marine Mammal CIA Screening

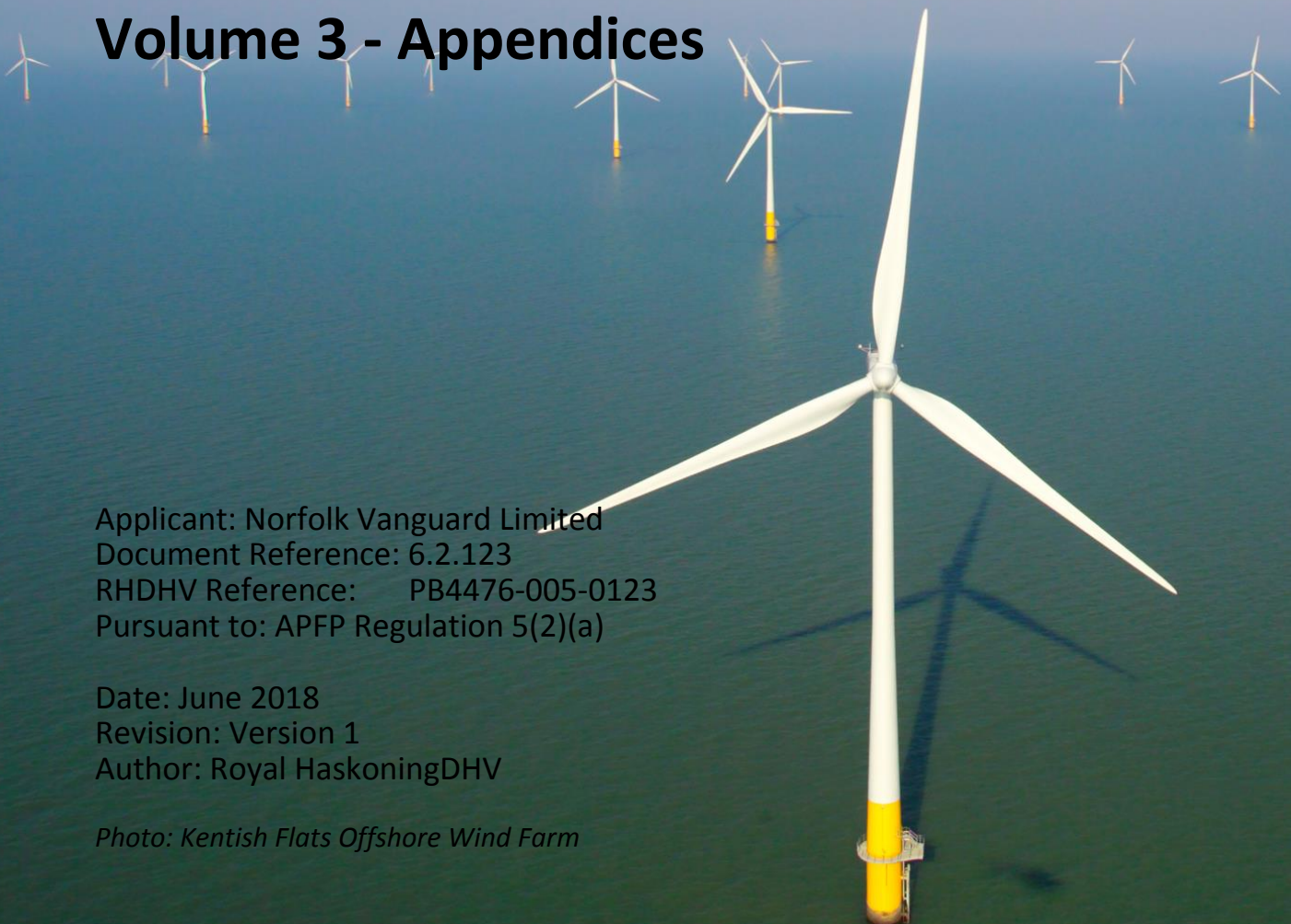
Environmental Statement

Volume 3 - Appendices

Applicant: Norfolk Vanguard Limited
Document Reference: 6.2.123
RHDHV Reference: PB4476-005-0123
Pursuant to: APFP Regulation 5(2)(a)

Date: June 2018
Revision: Version 1
Author: Royal HaskoningDHV

Photo: Kentish Flats Offshore Wind Farm



Environmental Impact Assessment Environmental Statement

Document Reference: PB4476-005-0123

June 2018

For and on behalf of Norfolk Vanguard Limited

Approved by: Ruari Lean and Rebecca Sherwood

Signed:

Date: 8th June 2018

For and on behalf of Royal HaskoningDHV

Drafted by: Jennifer Learmonth

Approved by: Alisatir Davison

Signed:

Date: 25th May 2018



Date	Issue No.	Remarks / Reason for Issue	Author	Checked	Approved
18/04/2018	01D	First draft for Norfolk Vanguard Limited review	JL	GK	PP
23/05/18	01F	Final for ES submission	JL	GK	AD

Contents

12.3	Marine Mammal CIA Screening	1
12.3.1	Introduction	1
12.3.2	Offshore wind farms.....	2
12.3.3	Marine renewables developments	13
12.3.4	Aggregate extraction and dredging (operational impacts only)	15
12.3.5	Offshore mining.....	15
12.3.6	Oil and gas installations/activities.....	20
12.3.7	Licensed disposal sites (operational impacts only)	26
12.3.8	Navigation and shipping (operational impacts only).....	34
12.3.9	Subsea cables and pipelines (commissioning/construction impacts only)	34
12.3.10	Carbon capture projects.....	35
12.3.11	Summary	36
Annex 1 - Initial List of UK and European Offshore Wind Farms considered within the CIA Screening		37
Annex 2 - Initial List of UK Wave and Tidal Projects considered within the CIA Screening		47

Tables

Table 12.1 Results of the CIA screening for UK offshore windfarm projects: list of UK Offshore Wind Farms (OWFs) (status at time of writing) within the harbour porpoise (HP), harbour seal (HS) and grey seal (GS) Management Units (MUs) and the HP Southern North Sea (SNS) candidate Special Area of Conservation (cSAC) with potential to overlap with Norfolk Vanguard (NV) construction, operation or decommissioning phases. N = No. Y = Yes.

4

Table 12.2 Results of the CIA screening for European offshore windfarm projects: list of UK OWFs (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

9

Table 12.3 Results of CIA screening for marine renewable projects: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning

14

Table 12.4 Results of CIA screening for aggregate extraction and dredging projects: list of UK projects (active status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

16

Table 12.5 Results of CIA screening for offshore mining projects: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning

19

Table 12.6 Results of CIA screening for oil and gas exploration and installations projects: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

21

Table 12.7 Results of CIA screening for disposal sites: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

28

Table 12.8 Results of CIA screening for subsea cables and pipelines: list of projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

34

Table 12.9 Number of plans or project from each category which have been screened into the CIA for each receptor and the stage of the plan or project where a cumulative impact may occur (C = commissioning / construction O = operation, D = decommissioning, N/A = not assessed as there is no pathway)

36

Glossary

CIA	Cumulative Impact Assessment
cSAC	Candidate Special Area of Conservation
ES	Environmental Statement
GS	Grey seal
HP	Harbour porpoise
HS	Harbour seal
NV	Norfolk Vanguard
MU	Management Unit
OWF	Offshore Wind Farm
SNS	Southern North Sea
UK	United Kingdom

Terminology

Array cables	Cables which link the wind turbines and the offshore electrical platform.
Interconnector cables	Buried offshore cables which link the offshore electrical platforms
Landfall	Where the offshore cables come ashore at Happisburgh South
Offshore accommodation platform	A fixed structure (if required) providing accommodation for offshore personnel. An accommodation vessel may be used instead
Offshore cable corridor	The corridor of seabed from the Norfolk Vanguard OWF sites to the landfall site within which the offshore export cables would be located.
Offshore electrical platform	A fixed structure located within the wind farm area, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore.
Offshore export cables	The cables which bring electricity from the offshore electrical platform to the landfall.
Offshore project area	The overall area of Norfolk Vanguard East, Norfolk Vanguard West and the offshore cable corridor
Safety zones	A marine zone outlined for the purposes of safety around a possibly hazardous installation or works / construction area under the Energy Act 2004.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.
The Applicant	Norfolk Vanguard Limited
The OWF sites	The two distinct offshore wind farm areas, Norfolk Vanguard East and Norfolk Vanguard West
The project	Norfolk Vanguard Offshore Wind Farm, including the onshore and offshore infrastructure

12.3 Marine Mammal CIA Screening

12.3.1 Introduction

1. The Tables in this Appendix summarise the CIA screening and lists of plans and projects which have been screened into the marine mammals cumulative impact assessment (CIA) as they were:
 - a. Within the agreed reference population boundary for the given receptor (see Section 12.5 of Chapter 12).
 - b. Had the potential to cause the type of impact which could have a cumulative impact with Norfolk Vanguard (Table 12.71 of Chapter 12).
 - c. From a tier (Table 12.10 of Chapter 12) which was screened into the assessment.
2. The screening results are provided for each type of plan/project including other offshore wind farms, other renewable developments, aggregate extraction and dredging, licensed disposal sites, navigation and shipping, planned construction of subsea cables and pipelines and oil and gas installations (including surveying).
3. Any plans or projects that have the potential for a construction/commissioning cumulative impact that commenced construction/commissioning between the end of the baseline and submission of the Environmental Statement (ES) will not be taken forward in the CIA for this type of cumulative impact. It is assumed that construction/commissioning will be completed before the start of construction of Norfolk Vanguard.
4. The screening is based on widest likely range of construction dates for Norfolk Vanguard between 2022 and 2030, with construction starting as early as 2022 and the likely latest end point for construction completion would be 2030 regardless of the consent window and construction duration of 3 to 7 years.

12.3.1.1 Data Sources

5. A wide range of data sources and information was used for the CIA and CIA screening, including, but not limited to:
 - Project ESs (and PEIR for Hornsea Project Three);
 - Developer websites;
 - 4C Offshore Winds Database (<http://www.4coffshore.com/offshorewind/>);
 - Renewable UK website (<http://www.renewableuk.com/>);
 - Crown Estate website;

- Oil and gas UK licensing rounds website (<https://www.gov.uk/guidance/oil-and-gas-licensing-rounds#past-licensing-rounds>);
- Cefas website (e.g. <http://data.cefas.co.uk/#/View/407>);
- Planning Inspectorate National Infrastructure Planning website;
- European Marine Observation and Data Network (EMODnet) data;
- Netherlands Oil and Gas (NLOG) website;
- Danish Energy Agency website;
- Norwegian Petroleum Directive website; and
- Dutch Ministry of Infrastructure and the Environment – Rijkswaterstaat website.

12.3.2 Offshore wind farms

6. Annex 1 lists all the United Kingdom (UK) and European offshore wind farm projects considered in the CIA screening categorised tier 1-5.

12.3.2.1 UK offshore wind farms

7. UK based projects (Table 12.1) listed in tiers 1-4 were screened in for potential construction, operation and maintenance, and decommissioning cumulative impacts, if those phases could overlap with the proposed construction, operation and maintenance, and decommissioning of Norfolk Vanguard and sufficient information and certainty in project programmes allowed for a meaningful assessment. In addition, tier 5 projects for which the applications are currently in preparation have also been screened in.
8. As a precautionary approach and to allow for any delays and changes in schedule, the potential for overlap with the proposed construction of Norfolk Vanguard with all UK consented (tier 3) projects is based on seven year window in which construction could occur (although some projects have a five year consent window). For UK tier 4 projects (application submitted) the possible construction windows were based on the best available information. This approach represents the worst-case scenario for the CIA.
9. As a more realistic approach, a second assessment (indicative scenario) included currently consented (tier 3) UK offshore wind farm developments that could be piling at the same time as Norfolk Vanguard, based on best available information on when the developments are likely to be piling. This indicative scenario is for illustrative purposes only and is likely to change but more accurately reflects the limitations and constraints to project delivery (see Section 12.7 of Chapter 12).
10. The screening resulted in a list of 52 UK offshore wind farms with the potential for construction, operation and decommissioning cumulative impacts on harbour porpoise. Of the 52 projects, 14 have the potential for construction to overlap with

the proposed construction of Norfolk Vanguard; 51 projects have the potential for operation and maintenance to overlap with the construction, operation and maintenance or decommissioning of Norfolk Vanguard; and all 52 projects have the potential for decommissioning to overlap with the operation and maintenance or decommissioning of Norfolk Vanguard, and therefore have the potential for cumulative impacts for harbour porpoise.

11. For grey seal, 35 projects have been screened in, with the potential of construction cumulative impacts for 13 projects; operation and maintenance cumulative impacts for 34 projects; and decommissioning cumulative impacts for all 35 projects.
12. For harbour seal, 32 projects were screened in, with 13 projects having the potential of construction cumulative impacts; all 32 with potential operations and maintenance cumulative impacts; and all 32 with possible decommissioning cumulative impacts. The results of the screening are presented in Table 12.1.

Table 12.1 Results of the CIA screening for UK offshore windfarm projects: list of UK Offshore Wind Farms (OWFs) (status at time of writing) within the harbour porpoise (HP), harbour seal (HS) and grey seal (GS) Management Units (MUs) and the HP Southern North Sea (SNS) candidate Special Area of Conservation (cSAC) with potential to overlap with Norfolk Vanguard (NV) construction, operation or decommissioning phases. N = No. Y = Yes.

Name of Project	Country	Status	Tier	Month/yr consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for				
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Forthwind Energy Test Site	UK	Commissioned	1			N	Y	Y	Y	N	N	N	N
Greater Gabbard	UK	Operational	1		96.33	N	Y	Y	Y	Y	Y	N	Y
Gunfleet Sands 3 (Demo Zone)	UK	Operational	1		147.78	N	Y	Y	Y	Y	Y	N	N
Gunfleet Sands I	UK	Operational	1		142.59	N	Y	Y	Y	Y	Y	N	N
Humber Gateway	UK	Operational	1		156.1	N	Y	Y	Y	Y	Y	N	N
Inner Dowsing	UK	Operational	1		126.55	N	Y	Y	Y	Y	Y	N	N
Kentish Flats	UK	Operational	1		173.66	N	Y	Y	Y	Y	Y	N	N
Kentish Flats Extension	UK	Operational	1		174.76	N	Y	Y	Y	Y	Y	N	N
Levenmouth (Demo)	UK	Operational	1		498.7	N	Y	Y	Y	N	N	N	N
Lincs	UK	Operational	1		122.41	N	Y	Y	Y	Y	Y	N	N
London Array	UK	Operational	1		138.07	N	Y	Y	Y	Y	Y	N	N
Lynn	UK	Operational	1		126.55	N	Y	Y	Y	Y	Y	N	N
Methil Samsung	UK	Commissioned	1			N	Y	Y	Y	N	N	N	N
Scroby Sands	UK	Operational	1		44.8	N	Y	Y	Y	Y	Y	N	Y
Sheringham Shoal	UK	Operational	1		75.42	N	Y	Y	Y	Y	Y	N	N
Teesside	UK	Operational	1		292.01	N	Y	Y	Y	Y	Y	N	N
Thanet	UK	Operational	1		159	N	Y	Y	Y	Y	Y	N	Y
Westermoot Rough	UK	Operational	1		169.44	N	Y	Y	Y	Y	Y	N	N
Blyth demonstration site (2)	UK	Operational	1		350	N	Y	Y	Y	Y	N	N	N
Dudgeon	UK	Operational	1		66.38	N	Y	Y	Y	Y	Y	N	N
Race Bank	UK	Operational	1		93.77	N	Y	Y	Y	Y	Y	N	N

Name of Project	Country	Status	Tier	Month/yr consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for				
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Hywind Pilot Park	UK	Commissioned	1		550	N	Y	Y	Y	N	N	N	N
Galloper	UK	Construction	2	May-13	93.11656	N	Y	Y	Y	Y	Y	N	Y
Hornsea Project One	UK	Construction	2	Dec-14	94.52	N	Y	Y	Y	Y	Y	Y	N
Moray East (including MORL MacColl, MORL Stevenson and MORL Telford)	UK	Construction	2	Mar-14	652.58	N	Y	Y	Y	N	N	N	N
Rampion (Southern Array)	UK	Construction	2	Jul-14	336.45	N	Y	Y	Y	N	N	N	N
Rampion Wind Farm	UK	Construction	2	Jul-14	336.45	N	Y	Y	Y	N	N	N	N
Beatrice	UK	Construction	2	Mar-14	661	N	Y	Y	Y	N	N	N	N
Blyth demonstration site (3A & 4)	UK	Consented	3	Nov-13	350	N	Y	Y	Y	Y	N	N	N
Dogger Bank Zone Creyke Beck A	UK	Consented	3	Feb-14 (5 year consent)	163	Y	Y	Y	Y	Y	Y	Y	N
Dogger Bank Zone Creyke Beck B	UK	Consented	3	Feb-14 (5 year consent)	193	Y	Y	Y	Y	Y	Y	Y	N
Dogger Bank Zone Teesside A	UK	Consented	3	Aug-15	180	Y	Y	Y	Y	Y	Y	Y	N
Sofia (previously Dogger Bank Zone Teesside B)	UK	Consented	3	Aug-15	175	Y	Y	Y	Y	Y	Y	Y	N
Dounreay Tri	UK	Postponed	3	Mar-17	785	unknown	Y	Y	Y	N	N	N	N
East Anglia One	UK	Consented	3	Jun-14 (5 year consent)	40	Y	Y	Y	Y	Y	Y	N	Y

Name of Project	Country	Status	Tier	Month/yr consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for				
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
East Anglia THREE	UK	Pre-Construction	3	2017	0	Y	Y	Y	Y	Y	Y	Y	Y
European Offshore Wind Deployment Centre EOWDC (Aberdeen Demonstration)	UK	Construction	3	Mar-13	530	N	Y	Y	Y	N	N	N	N
Hornsea Project Two	UK	Pre-construction	3	Aug-16 (5 year consent)	125	Y	Y	Y	Y	Y	Y	Y	N
Kincardine (floating turbines)	UK	Consented	3	Mar-17	535	Y	Y	Y	Y	N	N	N	N
Triton Knoll phase 1-3	UK	Consented	3	Jul-13	288	Y	Y	Y	Y	Y	Y	N	N
Firth of Forth Phase 1 Seagreen Alpha	UK	Consented	4	Oct-14 ON-HOLD	500	unknown	Y	Y	Y	N	N	N	N
Firth of Forth Phase 1 Seagreen Bravo	UK	Consented	4	Oct-14 ON-HOLD	500	unknown	Y	Y	Y	N	N	N	N
Neart na Gaoithe	UK	Consented	4	Oct-14 ON-HOLD	475	unknown	Y	Y	Y	N	N	N	N
Hywind 2 (NB project will Nt pile foundations)	UK	Application submitted	4	Oct-15	551.6	N	Y	Y	Y	N	N	N	N
Inch Cape	UK	Consented	4	ON-HOLD	510	unknown	Y	Y	Y	N	N	N	N
Moray West	UK	Application in preparation	5	ON-HOLD	660	unknown	Y	Y	Y	N	N	N	N
Norfolk Boreas	UK	Application in preparation	5	-	30	Y	Y	Y	Y	Y	Y	Y	Y
Hornsea Project THREE	UK	Application in preparation	5	-	80	Y	Y	Y	Y	Y	Y	Y	Y

Name of Project	Country	Status	Tier	Month/yr consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for				
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
East Anglia ONE North	UK	Scoping in preparation	5	-	30	Y	Y	Y	Y	Y	Y	Y	Y
East Anglia TWO	UK	Scoping in preparation	5	-	45	Y	Y	Y	Y	Y	Y	Y	Y
Thanet Extension	UK	Application in preparation	5	-	165	Y	Y	Y	Y	Y	Y	Y	Y

HP = harbour porpoise, GS = grey seal, HS = harbour seal, MU = Management Unit, SNS = Southern North Sea, cSAC = candidate Special Area of Conservation

12.3.2.2 European offshore wind farms

13. European projects (Table 12.2) listed in tier 1-3 were considered for the CIA. The screening for the construction of the European offshore wind farm tier 3 projects was based on the seven year window in which construction could occur (e.g. date of consent for tier 3 projects were in 2015 or later). If there was no information or any uncertainty, the projects were screened in as a precautionary approach.
14. The screening resulted in a list of 66 European offshore wind farms with the potential for construction, operation and decommissioning cumulative impacts on harbour porpoise. Of the 66 projects, 7 have the potential for construction to overlap with the proposed construction of Norfolk Vanguard; all projects have the potential for operation and maintenance to overlap with the construction, operation and maintenance or decommissioning of Norfolk Vanguard; and all projects have the potential for decommissioning to overlap with the operation and maintenance or decommissioning of Norfolk Vanguard, and therefore have potential of cumulative impacts for harbour porpoise.
15. For grey seal, 57 projects have been screened in, with the potential of construction cumulative impacts for 7 projects; operation and maintenance cumulative impacts for all 57 projects; and decommissioning cumulative impacts for all 57 projects.
16. For harbour seal, 57 projects were screened in, with 7 projects having the potential of construction cumulative impacts; all 57 with potential operations and maintenance cumulative impacts; and all 57 with possible decommissioning cumulative impacts. The results of the screening are presented in Table 12.2.

Table 12.2 Results of the CIA screening for European offshore windfarm projects: list of UK OWFs (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

Name of Project	Country	Status	Tier	Month/year consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for		
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU
Belwind 1	Belgium	Commissioned	1	2008	116.43	N	Y	Y	Y	Y	Y
Belwind 2 (zone 3, Bligh Bank)	Belgium	Commissioned	1		116.43	N	Y	Y	Y	N	N
Belwind Alstom Haliade Demonstration	Belgium	Commissioned	1		118.25	N	Y	Y	Y	Y	Y
Mermaid	Belgium	Consented	3	2015	125	Y	Y	Y	Y	Y	Y
Nobelwind	Belgium	Commissioned	1	2008	115.78	N	Y	Y	Y	Y	Y
Norther	Belgium	Pre-Construction	3	Jan-12	150	N	Y	Y	Y	Y	Y
Northwester 2	Belgium	Consented	3	2015	130	Y	Y	Y	Y	Y	Y
Northwind	Belgium	Commissioned	1	2009	123.6	N	Y	Y	Y	Y	Y
RENTEL	Belgium	Construction	3	Feb-14	140	N	Y	Y	Y	Y	Y
SeaStar	Belgium	Consented	3	2014	135	N	Y	Y	Y	Y	Y
Thornton Bank phase I	Belgium	Commissioned	1	2004	134.05	N	Y	Y	Y	Y	Y
Thornton Bank phase II	Belgium	Commissioned	1	2004	131.32	N	Y	Y	Y	Y	Y
Thornton Bank phase III	Belgium	Commissioned	1	2004	133.29	N	Y	Y	Y	Y	Y
Haliade	Denmark	Commissioned	1		632.6	N	Y	Y	Y	N	N
Horns Rev 1	Denmark	Commissioned	1	2001	419.07	N	Y	Y	Y	Y	Y
Horns Rev 2	Denmark	Commissioned	1	2007	413.48	N	Y	Y	Y	Y	Y
Horns Rev 3	Denmark	Pre-Construction	3	2015	424.06	N	Y	Y	Y	Y	Y
Nissum Bredning Vind	Denmark	Construction underway (gravity based jacket concept)	3	2017	555	N	Y	Y	N	N	N
Rønland	Denmark	Commissioned	1	2009	531.36	N	Y	Y	Y	N	N
Vesterhav Nord/Syd	Denmark	Consented	3	2016	560	N*	Y	Y	Y	N	N

Name of Project	Country	Status	Tier	Month/year consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for		
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU
Alpha Ventus	Germany	Commissioned	1	2001	262.75	N	Y	Y	Y	Y	Y
Amrumbank West	Germany	Commissioned	1	2004	349.12	N	Y	Y	Y	Y	Y
BARD Offshore 1	Germany	Commissioned	1	2007	244.05	N	Y	Y	Y	Y	Y
Borkum Riffgrund I	Germany	Commissioned	1	2001	255.4	N	Y	Y	Y	Y	Y
Borkum Riffgrund II	Germany	Construction	3	Dec-11	250	N	Y	Y	Y	Y	Y
Borkum Riffgrund West I	Germany	Consented	3	2004	230	N	Y	Y	Y	Y	Y
Butendiek (Offshore-Bürger- windpark)	Germany	Commissioned	1	2002	383.98	N	Y	Y	Y	N	N
Dan Tysk	Germany	Commissioned	1	2005	359.55	N	Y	Y	Y	Y	Y
Delta Nordsee 1	Germany	Consented	3	2005	300	Y	Y	Y	Y	Y	Y
Delta Nordsee 2 (OWP Delta Nordsee 2)	Germany	Consented	3	2009	300	Y	Y	Y	Y	Y	Y
Deutsche Bucht	Germany	Consented	3	Feb-10	255	N	Y	Y	Y	Y	Y
EnBW He Dreiht	Germany	Consented	3	2010	255.97	N	Y	Y	Y	Y	Y
EnBW Hohe See (Hochsee Windpark 'Nrdsee')	Germany	Construction	3	Jul-06	295	N	Y	Y	Y	Y	Y
ENOVA Ems Emden	Germany	Commissioned	1	2003	270.2	N	Y	Y	Y	Y	Y
Global Tech I	Germany	Commissioned	1	2006	276.81	N	Y	Y	Y	Y	Y
Gode Wind 04	Germany	Consented	3	2009	289.82	N	Y	Y	Y	Y	Y
Gode Wind 1 and 2	Germany	Commissioned	1	2009	283.15	N	Y	Y	Y	Y	Y
Meerwind Sud/Ost	Germany	Commissioned	1	2007	341.15	N	Y	Y	Y	Y	Y
Merkur	Germany	Construction	3	2009	300	N	Y	Y	Y	Y	Y
Nordergrunde	Germany	Construction	2	2008	352.55	N	Y	Y	Y	Y	Y
Nordlicher Grund	Germany	Consented	3	2005	343.13	N	Y	Y	Y	Y	Y
Nordsee 2 (InNgy Nordsee II)	Germany	Consented	3	2013	275.73	N	Y	Y	Y	Y	Y
Nordsee 3 (InNgy Nordsee III)	Germany	Consented	3	2014	280.63	N	Y	Y	Y	Y	Y
Nordsee One (InNgy Nordsee I)	Germany	Construction	2	2012	269.71	N	Y	Y	Y	Y	Y
Nordsee Ost	Germany	Commissioned	1	2004	343.75	N	Y	Y	Y	Y	Y

Name of Project	Country	Status	Tier	Month/year consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for		
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU
OWP Albatros Phase 1	Germany	Construction	3	2011	300	N	Y	Y	Y	Y	Y
OWP Albatros Phase 2	Germany	Construction	3		300	N	Y	Y	Y	Y	Y
OWP West	Germany	Consented	3	Apr-14	265	N	Y	Y	Y	Y	Y
Riffgat	Germany	Commissioned	1	2010	239.73	N	Y	Y	Y	Y	Y
Sandbank	Germany	Commissioned	1	2004	346.8	N	Y	Y	Y	Y	Y
Sandbank Plus	Germany	Consented	3	2004	376	N	Y	Y	Y	Y	Y
Trianel Windpark Borkum Phase 1 (Borkum West II phase 1)	Germany	Commissioned	1	2008	254.16	N	Y	Y	Y	Y	Y
Trianel Windpark Borkum Phase 2 (aka Borkum West II phase 2)	Germany	Construction	3	2007	280	N	Y	Y	Y	Y	Y
Veja Mate	Germany	Commissioned	1	2009	236.49	N	Y	Y	Y	Y	Y
Borssele I and II	Netherlands	Pre-Construction	3	May-16	133	Y	Y	Y	Y	Y	Y
Borssele III and IV	Netherlands	Consented	3	May-16	123	Y	Y	Y	Y	Y	Y
Borssele Site V - Leeghwater - InNvation Plot	Netherlands	Consented	3	May-16	107.61	Y	Y	Y	Y	Y	Y
Egmond aan Zee (aka OWEZ)	Netherlands	Commissioned	1	2005	88.07	N	Y	Y	Y	Y	Y
Eneco Luchterduinen	Netherlands	Commissioned	1	2012	84.51	N	Y	Y	Y	Y	Y
Gemini	Netherlands	Commissioned	1	2009	221.37	N	Y	Y	Y	Y	Y
Irene Vorrink	Netherlands	Commissioned	1		168.35	N	Y	Y	Y	Y	Y
Prinses Amalia Windpark (formerly Q7)	Netherlands	Commissioned	1	2008	78.8	N	Y	Y	Y	Y	Y
Westermeerwind	Netherlands	Commissioned	1	2012	167.79	N	Y	Y	Y	Y	Y
Hywind - Metcentre	Norway	Fully Commissioned	1	2006	695.53	N	Y	Y	Y	N	N
Kvitsøy Wind Turbine Demonstration Area	Norway	Consent Authorised	3	2010	693.82	N	Y	Y	Y	N	N

Name of Project	Country	Status	Tier	Month/year consent authorised	Distance to NV (km)	Phase of plan considered in CIA			Spatial Area Screened in for		
						Construction	Operation & Maintenance	Decommissioning	HP MU	GS MU	HS MU
Karmøy Marine Energy Test Centre (Metcentre)	Norway	Consent Authorised	3		693.82	N	Y	Y	Y	N	N
Rennesøy Wind Turbine Demonstration Area	Norway	Consent Authorised	3	2010	695.06	N	Y	Y	Y	N	N

HP = harbour porpoise, GS = grey seal, HS = harbour seal, MU = Management Unit, SNS = Southern North Sea, cSAC = candidate Special Area of Conservation

*Vesterhav Nord/Syd: License sets out construction to be complete by the end of 2020, therefore no overlap with Norfolk Vanguard construction

12.3.3 Marine renewables developments

17. Marine renewable projects assessed in the CIA screening were tier 1-5 for UK based projects, and tier 1-3 for other European projects. Annex 2 lists all in the marine renewable projects considered in the CIA screening.
18. UK based projects listed in tiers 1-4 were screened in for potential construction, operation and maintenance and decommissioning cumulative impacts, if those phases could overlap with the proposed construction, operation and maintenance, and decommissioning of Norfolk Vanguard and sufficient information was available to determine this. No European projects have been screened in (tier 3 or above). The results of the screening are in Table 12.3.
19. A total of nine projects were screened into the harbour porpoise CIA, three could have the potential for construction to overlap with the proposed construction of Norfolk Vanguard (however, piling is highly unlikely to be used during the installation of the marine renewable projects), and all nine have the potential for operational cumulative impacts.
20. No marine renewable projects were screened into the CIA for grey seal or harbour seal.
21. Piling is highly unlikely to be used during the installation of the marine renewable projects. The installation of wave/tidal projects is typically using drilled pins or gravity bases. Percussive piling is not anticipated to be used as an installation method and therefore the noise impacts during construction will have a very limited impact range, especially compared to offshore wind farms.
22. The installation of wave or tidal developments is highly unlikely to contribute to the cumulative impacts of the disturbance of harbour porpoise from underwater noise sources and therefore have not been included in the CIA.
23. Similarly the operation and maintenance of wave and tidal projects are also highly unlikely to contribute to the cumulative impacts of the disturbance of harbour porpoise from underwater noise sources and therefore have not been included in the CIA.

Table 12.3 Results of CIA screening for marine renewable projects: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning

Name of Project	Type of Project	Country	Status	Tier	Phase of plan considered in CIA			HP MU	Spatial Area Screened in for			
					Construction	Operation & Maintenance	Decommissioning		GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Bluemell Sound	Tidal	UK	Operational	1	N	Y	Y	Y	N	N	N	N
EMEC - Billia Croo	Wave	UK	Operational	1	N	Y	Y	Y	N	N	N	N
EMEC Fall of Warness	Tidal	UK	Operational	1	N	Y	Y	Y	N	N	N	N
EMEC Shapinsay Sound	Tidal	UK	Operational	1	N	Y	Y	Y	N	N	N	N
Inner Sound - MeyGen	Tidal	UK	Operational	1	Y	Y	Y	Y	N	N	N	Y
North Yell	Tidal	UK	Operational	1	N	Y	Y	Y	N	N	N	N
Scapa Flow	Wave	UK	Operational	1	N	N	N	Y	N	N	N	N
Perpetuus Tidal Energy Centre (PTEC)	Tidal	UK	Consented ON HOLD	3	Y	Y	Y	Y	N	N	N	Y
Brims tidal array (formerly Cantick Head)	Tidal	UK	Application submitted	4	Y	Y	Y	Y	N	N	N	N

HP = harbour porpoise, GS = grey seal, HS = harbour seal, MU = Management Unit, SNS = Southern North Sea, cSAC = candidate Special Area of Conservation

12.3.4 Aggregate extraction and dredging (operational impacts only)

24. Aggregate extraction and dredging projects considered for the CIA screening were tier 1-3 for UK based projects (Table 12.4); no European projects were screened in due to a lack of information.
25. No projects were identified in tier 2 or 3, and all of the tier 1 projects identified by screening were already active dredge zones, and are therefore considered part of the baseline. Therefore the 92 projects were screened out from further consideration in the CIA for marine mammals during the proposed construction, operation and maintenance and decommissioning of Norfolk Vanguard.

12.3.5 Offshore mining

26. Offshore mining projects considered for the CIA screening were tier 1-3 for UK based projects (Table 12.5); no European projects were assessed in due to a lack of information.
27. Two projects were identified, one under construction and one operational within the MU areas for harbour porpoise and grey seal.
28. The operational project is considered part of the current baseline and therefore not considered further in the CIA.
29. The other project is unlikely to contribute significantly to underwater noise as any construction will be on land or under the seabed, based on currently available information, and therefore not considered further in the CIA.

Table 12.4 Results of CIA screening for aggregate extraction and dredging projects: list of UK projects (active status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

Name of Project	Area	Distance to NV (km)	Tier	Spatial Area Screened in for				
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
106 East	480	120.71	1	Y	Y	N	N	N
ABP Lowestoft	TH005	58.34	1	Y	Y	Y	N	Y
Area 1 South	478	302.15	1	Y	N	N	N	N
Cleveland Potash Outfall	TY181	275.55	1	Y	Y	N	N	N
Cross Sands	296	34.74	1	Y	Y	Y	N	Y
Cross Sands	242 -361/1-3	31.05	1	Y	Y	Y	Y	Y
Cutline	447	103.86	1	Y	Y	Y	N	N
Cutline	447	103.86	1	Y	Y	Y	N	N
Cutline	447	117.20	1	Y	Y	Y	N	N
EEC 5 South	482	282.37	1	Y	Y	Y	N	N
EEC North	473, 474 & 475	283.63	1	Y	Y	Y	N	N
EEC South	475	283.64	1	Y	Y	Y	N	N
Goodwin Sands	521	185.68	1	Y	Y	Y	N	N
Goodwin Sands		185.68	1	Y	Y	Y	N	N
Great Yarmouth Inner Harbour	HU150	51.36	1	Y	Y	Y	N	Y
Greenwich Light East	473	289.61	1	Y	Y	Y	N	N
Greenwich Light East	473/1	296.19	1	Y	Y	Y	N	N
Greenwich Light East	473/2	296.19	1	Y	Y	Y	N	N
Humber	514	136.58	1	Y	Y	Y	N	N
Humber 3	484	60.18	1	Y	Y	Y	Y	N
Humber 4	490	82.06	1	Y	Y	Y	Y	N
Humber 4 and 7	506	81.20	1	Y	Y	Y	N	N
Humber 5	483	65.78	1	Y	Y	Y	Y	N
Humber 7	491	77.74	1	Y	Y	Y	N	N
Humber Estuary	400 & 106/1-3	124.78	1	Y	Y	Y	N	N
Humber Overfalls	493	134.82	1	Y	Y	Y	N	N
Humber Region	514/1-4	136.58	1	Y	Y	Y	N	N
Inner Dowsing	439	124.00	1	Y	Y	Y	N	N
Inner Dowsing	481/1-2	116.59	1	Y	Y	Y	N	N
Inner Dowsing	481/1-2	113.76	1	Y	Y	Y	N	N

Name of Project	Area	Distance to NV (km)	Tier	Spatial Area Screened in for				
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Inner Owers	396/1-2	309.72	1	Y	Y	N	N	N
Inner Owers	435/1-2	305.23	1	Y	Y	N	N	N
Inner Owers North	488	308.74	1	Y	Y	N	N	N
Longsand	508	128.01	1	Y	Y	N	N	Y
Longsand	509/1-3	124.21	1	Y	Y	N	N	Y
Longsand	510/1-2	128.01	1	Y	Y	N	N	Y
Median Deep	461	316.37	1	Y	N	N	N	N
Needles Isle of Wight	137	366.38	1	Y	N	N	N	N
New 495	525	27.33	1	Y	Y	Y	Y	Y
Norfolk	212	34.19	1	Y	Y	Y	N	Y
North Cross Sands	494	32.78	1	Y	Y	Y	N	Y
North Falls East	501	113.83	1	Y	Y	Y	N	Y
North Inner Gabbard	498	90.46	1	Y	Y	Y	N	Y
North Inner Gabbard	498	90.46	1	Y	Y	Y	N	Y
North Nab	372/1	337.68	1	Y	N	N	N	N
Off Great Yarmouth	228	41.76	1	Y	Y	Y	N	Y
Off Great Yarmouth	254	40.63	1	Y	Y	Y	N	Y
Off Great Yarmouth	328/1-3		1	Y	Y	Y	N	Y
Off Great Yarmouth Extension	240	38.78	1	Y	Y	Y	N	Y
Off Saltfleet	197	131.83	1	Y	Y	Y	N	N
Off Saltfleet	197	131.83	1	Y	Y	Y	N	N
Off Selsey Bill	395/1-2	331.61	1	Y	N	N	N	N
Off Selsey Bill	395/1-2	331.46	1	Y	N	N	N	N
Outer Dowsing	515/1-2	90.54	1	Y	Y	Y	N	N
Owers Extension	453	307.16	1	Y	N	N	N	N
Shipwash	507	93.89	1	Y	Y	Y	N	Y
South East Isle of Wight	340	341.43	1	Y	N	N	N	N
South East Isle of Wight	351	341.43	1	Y	N	N	N	N
South East Isle of Wight	340	341.43	1	Y	N	N	N	N
South East Isle of Wight	351	332.47	1	Y	N	N	N	N
South East Isle of Wight	351	332.47	1	Y	N	N	N	N
South Hastings	460	460	1	Y	Y	Y	N	N
South Hastings	460	261.39	1	Y	Y	Y	N	N

Name of Project	Area	Distance to NV (km)	Tier	Spatial Area Screened in for				
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
South Hastings	460	261.39	1	Y	Y	Y	N	N
South West Isle of Wight	127	378.07	1	Y	N	N	N	N
South West Isle of Wight	127/1-3	377.35	1	Y	N	N	N	N
South Wight	500	378.40	1	Y	N	N	N	N
South Wight	500	376.31	1	Y	N	N	N	N
Southwold East	430	63.24	1	Y	Y	Y	N	Y
Southwold East	430	63.24	1	Y	Y	Y	N	Y
St Catherine's	407	351.71	1	Y	N	N	N	N
St Catherine's	451	335.60	1	Y	N	N	N	N
TBC	511	46.64	1	Y	Y	Y	N	Y
TBC	512	43.16	1	Y	Y	Y	N	Y
TBC	242-361 & 328a		1	Y	Y	Y	N	Y
TBC	254	40.63	1	Y	Y	Y	N	Y
TBC	273 East		1	Y	Y	Y	N	Y
TBC	328		1	Y	Y	Y	N	Y
TBC	473, 474 & 475	283.63	1	Y	Y	Y	N	Y
TBC	500		1	Y	Y	Y	N	Y
TBC	513/1-2	37.81	1	Y	Y	Y	N	Y
TBC			1	Y	Y	Y	N	Y
Thames C	523	100.61	1	Y	Y	Y	N	Y
Thames D	524	119.13	1	Y	Y	Y	N	Y
West Bassurelle	458	282.42	1	Y	Y	Y	N	N
West Bassurelle	464	282.42	1	Y	Y	Y	N	N
West Bassurelle	458 & 464	282.42	1	Y	Y	Y	N	N
West Bassurelle	458 & 464	282.42	1	Y	Y	Y	N	N
West Wight	522	364.63	1	Y	N	N	N	N
Yarmouth	401/2A	31.48	1	Y	Y	Y	N	Y
Yarmouth	401/2B	31.48	1	Y	Y	Y	N	Y

HP = harbour porpoise, GS = grey seal, HS = harbour seal, MU = Management Unit, SNS = Southern North Sea, cSAC = candidate Special Area of Conservation

Table 12.5 Results of CIA screening for offshore mining projects: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning

Name of Project	Type of Project	Country	Status	Phase of plan considered in CIA			HP MU	Spatial Area Screened in for			
				Construction	Operation & Maintenance	Decommissioning		GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Hundale Potash Mine	Offshore Minerals Exploration and Option	UK	Construction	Y	Y	Y	Y	Y	N	N	N
Boulby Potash Mine	Offshore Minerals Lease	UK	Operational	N	Y	Y	Y	Y	N	N	N

HP = harbour porpoise, GS = grey seal, HS = harbour seal, MU = Management Unit, SNS = Southern North Sea, cSAC = candidate Special Area of Conservation

12.3.6 Oil and gas installations/activities

30. Oil and gas exploration and installations could have the potential for cumulative impacts during construction, operation and maintenance, and decommissioning of Norfolk Vanguard. Plans or projects considered during the CIA screening were tier 1-3 for UK based projects; no European projects are assessed in due to a lack of information.
31. All tier 1 projects considered in CIA screening were actively producing at the end of the baseline, and are therefore not considered for construction, operational and maintenance impacts. There is a large amount of uncertainty around decommissioning, and although there are a number of fields where production has ceased, no assumptions have been made about any decommissioning activities. Therefore this phase of oil and gas projects has been screened out of the CIA.
32. Oil and gas activities considered in the CIA screening are tier 2 and 3 projects based on the 28th supplementary, 29th and 30th Round of Offers (see <https://www.gov.uk/oil-and-gas-licensing-rounds#past-licensing-rounds> for more detail). Confirming which of the Licence block or part blocks from these rounds are in which period of the Licence or whether exploration or extraction may be occurring is outwith the scope of this CIA. There is the potential that each of these plans or projects could be either in commissioning/exploration or operational phase during the lifespan of Norfolk Vanguard.
33. A number of Licence blocks west of Shetland were also identified during screening, some of these blocks are on the boundary of the harbour porpoise North Sea Management Unit and have been screened out of the assessment due to the large spatial separation between the Norfolk Vanguard site and the location of these blocks.
34. Table 12.6 lists the Licence blocks or part blocks (plans/projects) which have been identified in the CIA screening. A total of 271 Licence blocks or part blocks in the MU for harbour porpoise, 111 in the MU for grey seal and 86 in the MU for harbour seal. However, there is currently no information on if or when these blocks will or could be developed. Therefore it is not currently possible to include them in the CIA, other than the potential seismic surveys that could be undertaken. Operational activity of oil and gas projects in currently developed blocks are considered part of the baseline and are therefore not included in the CIA.

Table 12.6 Results of CIA screening for oil and gas exploration and installations projects: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

Block	Distance to NV (km)	Round	Spatial Area Screened in for				
			HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
10/6	751.80	30	Y	N	N	N	N
12/28 (Part)	639.00	28	Y	N	N	N	N
13/18	653.00	30	Y	N	N	N	N
13/19	653.00	30	Y	N	N	N	N
13/20	653.00	30	Y	N	N	N	N
13/27	653.00	30	Y	N	N	N	N
14/23	609.80	30	Y	N	N	N	N
14/24	609.80	30	Y	N	N	N	N
14/29	586.40	30	Y	N	N	N	N
15/19	596.50	30	Y	N	N	N	N
15/24	606.30	30	Y	N	N	N	N
15/26a	574.80	30	Y	N	N	N	N
15/28	574.80	30	Y	N	N	N	N
15/9 (Part), 15/10, 15/14, 15/15, 16/6b & 16/11a	596.50	29	Y	N	N	N	N
16/11b	621.10	30	Y	N	N	N	N
16/16	603.00	30	Y	N	N	N	N
16/30	560.30	30	Y	N	N	N	N
16/4	648.80	30	Y	N	N	N	N
19/1	588.00	30	Y	N	N	N	N
19/2	588.00	30	Y	N	N	N	N
19/3	588.00	30	Y	N	N	N	N
19/6	588.00	30	Y	N	N	N	N
19/7	588.00	30	Y	N	N	N	N
19/8	588.00	30	Y	N	N	N	N
19/9	588.00	30	Y	N	N	N	N
2/10a	859.00	30	Y	N	N	N	N
2/20	859.00	30	Y	N	N	N	N
2/25	859.00	30	Y	N	N	N	N
2/30	859.00	30	Y	N	N	N	N
20/10	558.00	30	Y	N	N	N	N
203/1	855	30	Y	N	N	N	N
203/2	855	30	Y	N	N	N	N
203/3	855	30	Y	N	N	N	N
203/4	855	30	Y	N	N	N	N
203/6	855	30	Y	N	N	N	N
203/7	855	30	Y	N	N	N	N
203/8	855	30	Y	N	N	N	N
21/28b	480	30	Y	N	N	N	N
21/28c	480	30	Y	N	N	N	N
21/7	544	30	Y	N	N	N	N
210/13	915	30	Y	N	N	N	N
210/14	915	30	Y	N	N	N	N
210/18	915	30	Y	N	N	N	N
210/19	915	30	Y	N	N	N	N
210/20a	915	30	Y	N	N	N	N
211/26b	930	30	Y	N	N	N	N

Block	Distance to NV (km)	Round	HP MU	GS MU	HS MU	Spatial Area Screened in for	
						SNS cSAC (Summer)	SNS cSAC (Winter)
211/26c	930	30	Y	N	N	N	N
211/30	930	30	Y	N	N	N	N
211/8	930	28	Y	N	N	N	N
213/10	975	30	Y	N	N	N	N
213/12	975	30	Y	N	N	N	N
213/13	975	30	Y	N	N	N	N
213/14	975	30	Y	N	N	N	N
213/16	975	30	Y	N	N	N	N
213/17	975	30	Y	N	N	N	N
213/18	975	30	Y	N	N	N	N
213/19b	975	30	Y	N	N	N	N
213/20d	975	30	Y	N	N	N	N
213/21	975	30	Y	N	N	N	N
213/22	975	30	Y	N	N	N	N
213/25a	975	30	Y	N	N	N	N
213/26a	975	30	Y	N	N	N	N
213/27b	975	30	Y	N	N	N	N
213/27c	975	30	Y	N	N	N	N
213/28	975	30	Y	N	N	N	N
213/29	975	30	Y	N	N	N	N
213/30	975	30	Y	N	N	N	N
213/4	975	30	Y	N	N	N	N
213/5	970	30	Y	N	N	N	N
213/8	970	30	Y	N	N	N	N
213/9	970	30	Y	N	N	N	N
214/1	888	30	Y	N	N	N	N
214/14	888	30	Y	N	N	N	N
214/15	888	30	Y	N	N	N	N
214/2	888	30	Y	N	N	N	N
214/20	888	30	Y	N	N	N	N
214/21	888	30	Y	N	N	N	N
214/22	888	30	Y	N	N	N	N
214/23	888	30	Y	N	N	N	N
214/24	888	30	Y	N	N	N	N
214/25	888	30	Y	N	N	N	N
214/26	888	30	Y	N	N	N	N
214/29	888	30	Y	N	N	N	N
214/3	888	30	Y	N	N	N	N
214/6	888	30	Y	N	N	N	N
214/7	888	30	Y	N	N	N	N
214/8	888	30	Y	N	N	N	N
216/17	1072	30	Y	N	N	N	N
216/18	1072	30	Y	N	N	N	N
216/19	1072	30	Y	N	N	N	N
216/20	1072	30	Y	N	N	N	N
216/21	1072	30	Y	N	N	N	N
216/22	1072	30	Y	N	N	N	N
216/23	1072	30	Y	N	N	N	N
216/24	1072	30	Y	N	N	N	N
216/25	1072	30	Y	N	N	N	N
216/26	1072	30	Y	N	N	N	N
216/27	1072	30	Y	N	N	N	N
216/28	1072	30	Y	N	N	N	N

Block	Distance to NV (km)	Round	HP MU	GS MU	HS MU	Spatial Area Screened in for	
						SNS cSAC (Summer)	SNS cSAC (Winter)
216/29	1072	30	Y	N	N	N	N
216/30	1072	30	Y	N	N	N	N
217/16	1058	30	Y	N	N	N	N
217/17	1058	30	Y	N	N	N	N
217/18	1058	30	Y	N	N	N	N
217/19	1058	30	Y	N	N	N	N
217/20	1058	30	Y	N	N	N	N
217/21	1058	30	Y	N	N	N	N
217/22b	1058	30	Y	N	N	N	N
217/23b	1058	30	Y	N	N	N	N
217/23c	1058	30	Y	N	N	N	N
217/24b	1058	30	Y	N	N	N	N
217/25	1058	30	Y	N	N	N	N
217/26	1058	30	Y	N	N	N	N
217/27a	1058	30	Y	N	N	N	N
217/28a	1058	30	Y	N	N	N	N
217/29	1058	30	Y	N	N	N	N
217/30	1058	30	Y	N	N	N	N
218/16	1033	30	Y	N	N	N	N
218/17	1033	30	Y	N	N	N	N
218/18	1033	30	Y	N	N	N	N
218/21	1033	30	Y	N	N	N	N
218/22	1033	30	Y	N	N	N	N
218/23	1033	30	Y	N	N	N	N
218/26	1033	30	Y	N	N	N	N
218/27	1033	30	Y	N	N	N	N
218/28	1033	30	Y	N	N	N	N
22/16	474	30	Y	N	N	N	N
22/17a	474	30	Y	N	N	N	N
22/3	474	30	Y	N	N	N	N
22/8	474	30	Y	N	N	N	N
23/1	475	30	Y	N	N	N	N
23/17	475	30	Y	N	N	N	N
23/6	475	30	Y	N	N	N	N
27/3, 27/4, 27/5, 27/9, 27/10, 28/1 & 28/6	405	29	Y	Y	N	N	N
28/10	412	30	Y	Y	N	N	N
28/15	412	30	Y	Y	N	N	N
28/20	412	30	Y	Y	N	N	N
28/5	412	30	Y	Y	N	N	N
29/11	414	30	Y	Y	N	N	N
29/12	414	30	Y	Y	N	N	N
29/13	414	30	Y	Y	N	N	N
29/14	414	30	Y	Y	N	N	N
29/15	414	30	Y	Y	N	N	N
29/16	414	30	Y	Y	N	N	N
29/17	414	30	Y	Y	N	N	N
29/18	414	30	Y	Y	N	N	N
29/19	414	30	Y	Y	N	N	N
29/20	414	30	Y	Y	N	N	N
29/22b, 29/23b, 29/27,	414	29	Y	Y	N	N	N

Block	Distance to NV (km)	Round	HP MU	GS MU	HS MU	Spatial Area Screened in for	
						SNS cSAC (Summer)	SNS cSAC (Winter)
29/28							
29/24	414	30	Y	Y	N	N	N
29/25	414	30	Y	Y	N	N	N
29/29	414	30	Y	Y	N	N	N
29/30	414	30	Y	Y	N	N	N
29/6	414	30	Y	Y	N	N	N
3/1	835	30	Y	N	N	N	N
3/12b	835	30	Y	N	N	N	N
3/16 (Part) & 3/17 (Part)	835	29	Y	N	N	N	N
3/16b	835	30	Y	N	N	N	N
3/17b	835	30	Y	N	N	N	N
3/18	835	30	Y	N	N	N	N
3/21	835	30	Y	N	N	N	N
3/22	835	30	Y	N	N	N	N
3/23	835	30	Y	N	N	N	N
3/26	835	30	Y	N	N	N	N
3/5	835	30	Y	N	N	N	N
3/6 (Part)	835	29	Y	N	N	N	N
3/6b	835	30	Y	N	N	N	N
30/21	412	30	Y	Y	y	N	N
30/22	412	30	Y	Y	y	N	N
30/23	412	30	Y	Y	y	N	N
30/26	412	30	Y	Y	y	N	N
30/27	412	30	Y	Y	y	N	N
30/28	412	30	Y	Y	y	N	N
30/8	412	30	Y	Y	y	N	N
31/21	335	30	Y	Y	y	N	N
31/26	335	30	Y	Y	y	N	N
31/27	335	30	Y	Y	y	N	N
35/24, 35/28, 35/29, 35/30, 36/21, 36/26, 36/27, 36/28, 36/29 & 42/2a	298	29	Y	Y	N	N	N
36/15 (Part), 36/20, 37/11 (Part) & 37/16	288	29	Y	Y	N	N	N
36/24, 36/25, 37/21, 37/22 (Split), 37/23 (Split), 37/28b & 37/29b	288	29	Y	Y	N	N	N
37/17, 37/18, 37/19, 37/22 (Split), 37/23 (Split) & 37/24	288	29	Y	Y	y	N	N
38/2	281	30	Y	Y	y	N	N
38/27, 38/28, 44/2 & 44/3 (Part)	281	29	Y	Y	y	N	N
38/3	281	30	Y	Y	y	N	N
38/4	281	30	Y	Y	y	N	N
38/5	281	30	Y	Y	y	N	N
39/1	244	30	Y	Y	y	N	N

Block	Distance to NV (km)	Round	HP MU	GS MU	HS MU	Spatial Area Screened in for	
						SNS cSAC (Summer)	SNS cSAC (Winter)
39/2	244	30	Y	Y	y	N	N
4/21	772	30	Y	n	N	N	N
41/3, 41/4 & 41/9	215.00	29	Y	Y	N	N	N
42/14	161	30	Y	Y	y	y	n
42/16	161	30	Y	Y	y	y	n
42/17	161	30	Y	Y	y	y	n
42/18	161	30	Y	Y	y	y	n
42/26	161	30	Y	Y	y	y	n
43/1	151	30	Y	Y	y	y	n
43/10	151	30	Y	Y	y	y	n
43/14	151	30	Y	Y	y	y	n
43/15	151	30	Y	Y	y	y	n
43/16	151	30	Y	Y	y	y	n
43/2	151	30	Y	Y	y	y	n
43/23	151	30	Y	Y	y	y	n
43/28	151	30	Y	Y	y	y	n
43/3	151	30	Y	Y	y	y	n
43/4	151	30	Y	Y	y	y	n
43/5	151	30	Y	Y	y	y	n
43/6	151	30	Y	Y	y	y	n
43/7	151	30	Y	Y	y	y	n
43/8	151	30	Y	Y	y	y	n
43/9	151	30	Y	Y	y	y	n
44/14	164	30	Y	Y	y	N	n
44/15	164	30	Y	Y	y	N	n
44/25	164	30	Y	Y	y	N	n
44/6	164	30	Y	Y	y	y	n
47/1	122	30	Y	Y	y	N	n
47/18	122	30	Y	Y	y	N	n
47/19	122	30	Y	Y	y	N	n
47/20	122	30	Y	Y	y	N	n
47/22	122	30	Y	Y	y	N	n
47/23	122	30	Y	Y	y	N	n
47/24	122	30	Y	Y	y	N	n
47/25	122	30	Y	Y	y	N	n
47/28	122	30	Y	Y	y	N	n
47/29	122	30	Y	Y	y	N	n
47/30	122	30	Y	Y	y	N	n
47/6	122	30	Y	Y	y	N	n
47/7	122	30	Y	Y	y	N	n
48/16	73	30	Y	Y	y	N	n
48/26	73	30	Y	Y	y	N	n
48/27	73	30	Y	Y	y	N	n
49/13	73	30	Y	Y	y	y	N
49/7	73	30	Y	Y	y	y	N
50/11	60	30	Y	Y	y	N	N
50/16	60	30	Y	Y	y	N	N
50/21	60	30	Y	Y	y	N	N
51/4	60	30	Y	Y	y	N	N
51/5	60	30	Y	Y	y	N	N
52/1	52	30	Y	Y	y	N	N
52/10	52	30	Y	Y	y	N	y

Block	Distance to NV (km)	Round	HP MU	GS MU	HS MU	Spatial Area Screened in for	
						SNS cSAC (Summer)	SNS cSAC (Winter)
52/14	52	30	Y	Y	y	N	y
52/15	52	30	Y	Y	y	N	y
52/19	52	30	Y	Y	y	N	y
52/2	52	30	Y	Y	y	N	N
52/20	52	30	Y	Y	y	N	y
52/3	52	30	Y	Y	y	N	N
52/8	52	30	Y	Y	y	N	y
52/9	52	30	Y	Y	y	N	y
53/11	8	30	Y	Y	y	y	y
53/12	6	30	Y	Y	y	y	y
53/13	10	30	Y	Y	y	y	y
53/16	25	30	Y	Y	y	N	y
53/17	25	30	Y	Y	y	N	y
53/18	35	30	Y	Y	y	N	y
53/19	35	30	Y	Y	y	N	y
53/6	20	30	Y	Y	y	N	y
53/7	20	30	Y	Y	y	N	y
53/8	20	30	Y	Y	y	N	y
53/9	20	30	Y	Y	y	N	y
8/20	723	30	Y	N	N	N	N
8/25	723	30	Y	N	N	N	N
8/27, 8/28b, 15/2, 15/3, 15/7 & 15/8	660	29	Y	N	N	N	N
8/5	723	30	Y	N	N	N	N
9/1	766	30	Y	N	N	N	N
9/10	766	30	Y	N	N	N	N
9/17b (Part) & 9/22 (Part)	766	29	Y	N	N	N	N
9/17c	766	30	Y	N	N	N	N
9/22c	766	30	Y	N	N	N	N
9/26 (Part)	766	29	Y	N	N	N	N
9/26b	766	30	Y	N	N	N	N
9/4	766	30	Y	N	N	N	N
9/7	766	30	Y	N	N	N	N

HP = harbour porpoise, GS = grey seal, HS = harbour seal, MU = Management Unit, SNS = Southern North Sea, cSAC = candidate Special Area of Conservation

12.3.7 Licenced disposal sites (operational impacts only)

35. Licenced disposal sites considered in the CIA screening were tier 1-3 for UK based projects; no European projects were assessed in due to a lack of information. Projects were assessed for potential operational impacts (construction and decommissioning impacts are not considered).
36. No projects were identified in tier 2 or 3, and the tier 1 projects identified during screening (Table 12.7) were already active sites, and are considered part of the baseline. Therefore, the 169 sites in the harbour porpoise MU, 127 sites in the grey seal MU and 105 sites in the harbour seal MU, were not considered further in the

CIA as there is no potential for any additional significant cumulative impacts with Norfolk Vanguard.

Table 12.7 Results of CIA screening for disposal sites: list of UK projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

Name of Project	Area	Country	Tier	Spatial Area Screened in for				
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Aberdeen	CR110	UK	1	Y	N	N	N	N
Amble Marina Outfall	TY022	UK	1	Y	Y	Y	N	N
Amble Offshore	underground coal gasification	UK	1	Y	Y	Y	N	N
Arbroath	FO020	UK	1	Y	N	N	N	N
Area 451 temporary storage site	WI053	UK	1	Y	N	N	N	N
Babbage	HU203	UK	1	Y	Y	Y	Y	N
Balnapaling	CR170	UK	1	Y	N	N	N	N
Basin 1 naval base portsmouth	WI065	UK	1	Y	N	N	N	N
Birdham Pool Marina	WI042	UK	1	Y	N	N	N	N
Blae Rock A	FO036	UK	1	Y	Y	Y	N	N
Blyth A + B	TY042	UK	1	Y	Y	Y	N	N
Blyth Offshore	underground coal gasification	UK	1	Y	Y	Y	N	N
Blyth OWF Demo	TY043	UK	1	Y	Y	Y	N	N
Bo'ness	FO044	UK	1	Y	Y	Y	N	N
Boston 7	HU170	UK	1	Y	Y	Y	N	N
Bridlington a	HU015	UK	1	Y	Y	Y	N	N
Brighton/ Rottingdean	WI020	UK	1	Y	Y	Y	N	N
Buckie	CR040	UK	1	Y	N	N	N	N
Bull sand fort	HU111	UK	1	Y	Y	Y	N	N
Bull sand fort extension	HU109	UK	1	Y	Y	Y	N	N
Burgh Castle Yacht Station	HU208	UK	1	Y	Y	Y	N	N
Burghead	CR030	UK	1	Y	N	N	N	N
Central Firth of Forth	underground coal gasification	UK	1	Y	N	N	N	N
Chichester harbour	WI045	UK	1	Y	N	N	N	N
Cleveland Potash Outfall	TY181	UK		Y	Y	Y	N	N
Copperas	TH216	UK	1	Y	Y	Y	N	N
Copperas Bay		UK	1	Y	Y	Y	N	N
Copperas Bay 2		UK	1	Y	Y	Y	N	N
Copperas East	TH208	UK	1	Y	Y	Y	N	N
Copperas West	TH209	UK	1	Y	Y	Y	N	N

Name of Project	Area	Country	Tier	Spatial Area Screened in for				SNS cSAC (Winter)
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	
Coquet Island	TY025	UK	1	Y	Y	N	N	N
Cromer	underground coal gasification	UK	1	Y	Y	Y	N	N
Cross sands 2	HU176	UK	1	Y	Y	Y	Y	Y
Dogger Bank Teeside A	DG030	UK	1	Y	Y	Y	N	N
Dogger Bank Teeside B	DG025	UK	1	Y	Y	Y	Y	N
Dounreay microsite	FI002	UK	1	Y	N	N	N	N
Dover	DV010	UK	1	Y	N	N	N	N
Dover - emergency site	DV011	UK	1	Y	N	N	N	N
Dudgeon OWF	HU147	UK	1	Y	Y	Y	N	N
Durham North and South.	underground coal gasification	UK	1	Y	Y	Y	N	N
EAOW3	HU212	UK	1	Y	Y	Y	Y	Y
East Halton	HU035	UK	1	Y	Y	Y	N	N
Eastbourne	DV040	UK	1	Y	N	N	N	N
Erwarton Bay		UK	1	Y	Y	Y	N	N
Erwarton East	TH207	UK	1	Y	Y	Y	N	N
Erwarton Track	TH217	UK	1	Y	Y	Y	N	N
Eyemouth	FO080	UK	1	Y	Y	Y	N	N
Firth of Forth,	underground coal gasification	UK	1	Y	N	N	N	N
Fraserburgh	CR060	UK	1	Y	N	N	N	N
Galloper owf	TH057	UK	1	Y	Y	Y	N	Y
Goole Reach	HU041	UK	1	Y	Y	Y	N	N
Granton	FO054	UK	1	Y	Y	N	N	N
Great Yarmouth	HU150	UK	1	Y	Y	Y	N	Y
Harwich Haven	TH027	UK	1	Y	Y	Y	Y	N
Hedon haven	HU022	UK	1	Y	Y	Y	N	N
Helmsdale	CR020	UK	1	Y	N	N	N	N
Holderness Offshore	underground coal gasification	UK	1	Y	Y	Y	N	N
Holme Channel Deep	HU056	UK	1	Y	Y	Y	N	N
Hornsea Disposal Area 1	HU205	UK	1	Y	Y	Y	N	N
Hornsea Disposal site area 2a	HU209	UK	1	Y	Y	Y	Y	N
Hornsea Disposal site area 2b	HU210	UK	1	Y	Y	Y	Y	N
Hornsea Disposal site subzone 2	HU211	UK	1	Y	Y	Y	Y	N
Hornsea Project One Subzone 1	HU206	UK	1	Y	Y	Y	Y	N

Name of Project	Area	Country	Tier	Spatial Area Screened in for				
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Humber		UK	1	Y	Y	N	N	N
Humber 1a	HU080	UK	1	Y	Y	N	N	N
Humber 2	HU090	UK	1	Y	Y	N	N	N
Humber 3a	HU060	UK	1	Y	Y	N	N	N
Humber 4	HU030	UK	1	Y	Y	N	N	N
Humber 4b/hook	HU020	UK	1	Y	Y	N	N	N
Humber 4b/hook extension	HU021	UK	1	Y	Y	N	N	N
Humber 5	HU483 (in application)	UK	1	Y	Y	N	N	N
Humber 7	HU506 (in application)	UK	1	Y	Y	N	N	N
Humber gateway OWF	HU097	UK	1	Y	Y	Y	N	N
Humber overfalls	493 (in application)	UK	1	Y	Y	N	N	N
Humberside coastal	underground coal gasification	UK	1	Y	Y	N	N	N
Hurst fort	WI080	UK	1	Y	N	N	N	N
Inner Dowsing	439 (in application)	UK	1	Y	Y	Y	N	N
Inner gabbard	TH052	UK	1	Y	Y	Y	N	Y
Inner gabbard east	TH056	UK	1	Y	Y	Y	N	Y
Inverness	CR027	UK	1	Y	N	N	N	N
Ipswich fox	TH031	UK	1	Y	Y	Y	N	N
Jacques Bay		UK	1	Y	Y	Y	N	N
Keadby Station	HU044	UK	1	Y	Y	Y	N	N
Kincardine,	underground coal gasification	UK	1	Y	N	N	N	N
Kinness Burn	FO055	UK	1	Y	Y	N	N	N
Lerwick	FI080	UK	1	Y	N	N	N	N
Lochboisdale	CR160	UK	1	Y	N	N	N	N
Loders cut island	TH021	UK	1	Y	Y	Y	N	N
Longhoughton Offshore	underground coal gasification	UK	1	Y	Y	N	N	N
Lowestoft circular Nrth	TH005	UK	1	Y	Y	Y	N	Y
Lowestoft marina temporary disposal site	TH011	UK	1	Y	Y	Y	N	Y
lymington habitat restoration	WI085	UK	1	Y	N	N	N	N
Lynemouth Offshore	underground coal gasification	UK	1	Y	Y	N	N	N
Macduff	CR050	UK	1	Y	N	N	N	N
Maidens	FO057	UK	1	Y	Y	N	N	N

Name of Project	Area	Country	Tier	Spatial Area Screened in for				
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Maldon saltings		UK	1	Y	Y	Y	N	N
Maldon Saltings 2		UK	1	Y	Y	Y	N	N
Maldon saltings 3	TH064	UK	1	Y	Y	Y	N	N
Methil	FO048	UK	1	Y	Y	Y	N	N
Middle Bank (tay)	FO028	UK	1	Y	N	N	N	N
Montrose	FO010	UK	1	Y	N	N	N	N
Musselburgh	underground coal gasification	UK	1	Y	N	N	N	N
Nab Tower	WI060	UK	1	Y	N	N	N	N
Narrow Deep B	FO038	UK	1	Y	Y	Y	N	N
Needles	WI090	UK	1	Y	N	N	N	N
Nemo Disposal site A	TH150	UK	1	Y	Y	Y	N	Y
Nemo Disposal site B	TH151	UK	1	Y	Y	Y	N	Y
Nemo Disposal site C	TH152	UK	1	Y	Y	Y	N	N
Newhaven	WI010	UK	1	Y	Y	Y	N	N
Newhaven	WI011	UK	1	Y	Y	Y	N	N
North Buchan Ness	CR080	UK	1	Y	N	N	N	N
North Cross Sands	494 (in application)	UK	1	Y	Y	Y	N	Y
North Edinburgh channel	TH080	UK	1	Y	Y	Y	N	N
North Tyne	TY070	UK	1	Y	Y	Y	N	N
North west shipwash	TH055	UK	1	Y	Y	Y	N	N
Noses Point	TY130	UK	1	Y	Y	Y	N	N
Orwell east	TH053	UK	1	Y	Y	Y	N	N
Orwell East Track	TH219	UK	1	Y	Y	Y	N	N
Orwell west	TH037	UK	1	Y	Y	Y	N	N
Orwell West Track	TH218	UK	1	Y	Y	Y	N	N
Oxcars ext a	FO042	UK	1	Y	Y	Y	N	N
Oxcars ext b	FO043	UK	1	Y	Y	Y	N	N
Oxcars main	FO041	UK	1	Y	Y	Y	N	N
Pegwell Bay	TH140	UK	1	Y	Y	Y	N	N
Pegwell Bay B		UK	1	Y	Y	Y	N	N
Peterhead	CR070	UK	1	Y	N	N	N	N
Peterhead Harbour	CR071	UK	1	Y	Y	N	N	N
Plantation wharf	TH095	UK	1	Y	Y	Y	N	N

Name of Project	Area	Country	Tier	Spatial Area Screened in for				
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	SNS cSAC (Winter)
Portsmouth ballast	WI064	UK	1	Y	N	N	N	N
PTEC south isle of wight	WI067	UK	1	Y	N	N	N	N
Queensferry	CR140	UK	1	Y	Y	N	N	N
Race Bank OWF	HU126	UK	1	Y	Y	Y	N	N
Rampion OWF	WI117	UK	1	Y	N	N	N	N
Ramsgate Harbour Site A		UK	1	Y	Y	Y	N	N
Ramsgate Harbour Site B		UK	1	Y	Y	Y	N	N
Reedham Marina	HU159	UK	1	Y	Y	Y	N	N
River Brora	CR180	UK	1	Y	N	N	N	N
River Carron	FO053	UK	1	Y	Y	N	N	N
River orwell (abp)	TH034	UK	1	Y	Y	Y	N	N
River Stour (area 1 subtidal s	TH211	UK	1	Y	Y	Y	N	N
Ryde harbour	WI071	UK	1	Y	N	N	N	N
Scapa	FI055	UK	1	Y	N	N	N	N
Scarborough Rock	TY190	UK	1	Y	Y	Y	N	N
Sherringham shoal drillings	HU123	UK	1	Y	Y	Y	N	N
Shoreham	WI031	UK	1	Y	Y	Y	N	N
Shoreham(aggregate)	WI035	UK	1	Y	Y	Y	N	N
Souter Point (outer)	TY081	UK	1	Y	Y	Y	N	N
South falls	TH070	UK	1	Y	Y	Y	N	Y
South Humber Offshore	underground coal gasification	UK	1	Y	Y	Y	N	N
St Monans	FO058	UK	1	Y	Y	N	N	N
Staithes Harbour	TY182	UK	1	Y	Y	Y	N	N
Stone creek	HU023	UK	1	Y	Y	Y	N	N
Stonner point	TH022	UK	1	Y	Y	Y	N	N
Sunderland	TY090	UK	1	Y	Y	Y	N	N
Sunderland Offshore	underground coal gasification	UK	1	Y	Y	Y	N	N
Sunk Dredge Channel A	HU082	UK	1	Y	Y	Y	N	N
Sunk Dredge Channel Window C	HU083	UK	1	Y	Y	Y	N	N
Sutors	CR019	UK	1	Y	N	N	N	N
Tees Bay A	TY160	UK	1	Y	Y	Y	N	N
Tees Bay C	TY150	UK	1	Y	Y	Y	N	N
Thames Estuary	In application	UK	1	Y	Y	Y	N	N

Name of Project	Area	Country	Tier	Spatial Area Screened in for				SNS cSAC (Winter)
				HP MU	GS MU	HS MU	SNS cSAC (Summer)	
Titchmarsh Saltings		UK	1	Y	Y	Y	N	N
Treloar hole	WI046	UK	1	Y	N	N	N	N
Triton KNII	HU204	UK	1	Y	Y	Y	N	N
Tyne Burial Site	TY193	UK	1	Y	Y	Y	N	N
Tyne Tunnel	TY085	UK	1	Y	Y	Y	N	N
Tynemouth Offshore	underground coal gasification	UK	1	Y	Y	N	N	N
ventNr harbour	WI087	UK	1	Y	N	N	N	N
Wash bank	HU114	UK	1	Y	Y	Y	N	N
Water of Girvan	FO056	UK	1	Y	Y	N	N	N
West of Ininner Drowsing Bank		UK	1	Y	Y	Y	N	N
West Stones	HU143	UK	1	Y	Y	Y	N	N
West wight	WI091	UK	1	Y	N	N	N	N
Westermost Rough OWF	HU207	UK	1	Y	Y	Y	N	N
Whitby	TY180	UK	1	Y	Y	Y	N	N
Whitgift Bight (river ouse)	HU040	UK	1	Y	Y	Y	N	N
Whitstable c	TH073	UK	1	Y	Y	Y	N	N
Wish Tower	DV045	UK	1	Y	N	N	N	N
Wittering beach	WI043	UK	1	Y	Y	Y	N	N
Wivenhoe Overflow	TH215	UK	1	Y	Y	Y	N	N
Wrabness Beach	TH213	UK	1	Y	Y	Y	N	N

HP = harbour porpoise, GS = grey seal, HS = harbour seal, MU = Management Unit, SNS = Southern North Sea, cSAC = candidate Special Area of Conservation

12.3.8 Navigation and shipping (operational impacts only)

37. Navigational and shipping projects considered in the CIA screening were tier 1-3 for UK based projects. All European projects were screened out. Projects were considered for potential operational impacts if the plan or project had not started by the end of the Norfolk Vanguard baseline.
38. No projects were identified in tier 2 or 3, and all of the tier 1 projects identified by screening were already active, and are therefore considered part of the baseline.
39. Therefore all navigation and shipping operations have been screened out of the CIA.

12.3.9 Subsea cables and pipelines (commissioning/construction impacts only)

40. Subsea cables and pipelines only have the potential for cumulative impacts with Norfolk Vanguard during their construction. Plans or projects assessed for the CIA screening were tier 1-3, plus tier 4 and 5 projects were also considered, where relevant. All of the tier 1 projects identified during screening were already installed, and are therefore considered part of the baseline.
41. For harbour porpoise, ten tier 2 projects were identified, in addition five tier 4 and 5 projects were also included in the CIA. For grey seal, six tier 2 projects and an additional five tier 4 and 5 projects were included in the CIA. For harbour seal, six tier 2 projects and an additional four tier 4 and 5 projects were included in the CIA (Table 12.8).

Table 12.8 Results of CIA screening for subsea cables and pipelines: list of projects (status at time of writing) within the HP, HS and GS MUs and the HP SNS cSAC with potential to overlap with Norfolk Vanguard construction, operation or decommissioning phases. N = No. Y = Yes.

Name of Project	Landfall Points	Company	Type of cable / pipeline	Tier	Within Species MU		
					HP	GS	HS
VikingLink Corridor	Lincolnshire Coast, UK to Southern Jutland, Denmark	National Grid Viking Link Ltd & Energinet.dk	Proposed High voltage (up to 500 kV) Direct Current (DC) electricity interconnector	4	Y	Y	Y
PL2236 - MIMAS TO SATURN	Blocks 48/09 & 49/11b (Norfolk Banks)	ConocoPhillips	10 inch GAS pipeline	2	Y	Y	Y
PL2237 - SATURN TO MIMAS	Blocks 48/09 & 49/11b (Norfolk Banks)	ConocoPhillips	3 inch CHEMICAL pipeline	2	Y	Y	Y
PLU3122 - JULIET TO PICKERILL A UMBILICAL	Block 48/11 (Norfolk Banks)	Engie	138 mm MIXED HYDROCARBONS pipeline	2	Y	Y	Y
PL3088 - CYGNUS TO ETS GAS PIPELINE	Block 44/11a & 44/12a (South Dogger Bank)	Engie	24 inch GAS pipeline	2	Y	Y	Y

Name of Project	Landfall Points	Company	Type of cable / pipeline	Tier	Within Species MU		
					HP	GS	HS
PL3086 - CYGNUS A TO CYGNUS B GAS PIPELINE	Block 44/11a & 44/12a (South Dogger Bank)	Engie	12 inch GAS pipeline	2	Y	Y	Y
PL2894 - KATY TO KELVIN GAS EXPORT PIPELINE	Block 44/19b (South Dogger Bank)	ConocoPhillips	10 inch GAS pipeline	2	Y	Y	Y
PL2895 - KELVIN TO KATY METHANOL PIPELINE	Block 44/19b (South Dogger Bank)	ConocoPhillips	2 inch METHANOL pipeline	2	Y	Y	Y
PL3121 - JULIET TO PICKERILL A GAS PIPELINE	Block 48/11 (Norfolk Banks)	Engie	12 inch MIXED HYDROCARBONS pipeline	2	Y	Y	Y
PL0219_PR K4-Z to K5-A	PR K4-Z to K5-A (Cleaver Bank)	Total E&P Nederland B.V.	6-inch Gas pipeline	2	Y	N	N
PL0219_UM K4-Z to K5-A	PR K4-Z to K5-A (Cleaver Bank)	Total E&P Nederland B.V.	5-inch Control pipeline	2	Y	N	N
PLU3087 - CYGNUS A TO CYGNUS B UMBILICAL	Block 44/11a & 44/12a (South Dogger Bank)	Engie	193.3 mm CHEMICAL pipeline	4	Y	Y	Y
PL0221_HS D18-A to D15-FA-1	HS D18-A to D15-FA-1 (South Dogger / Cleaver Bank)	GDF SUEZ E&P Nederland B.V.	2-inch Methanol pipeline	4	Y	N	N
PL0221_PR D18-A to D15-FA-1	PR D18-A to D15-FA-1 (South Dogger / Cleaver Bank)	GDF SUEZ E&P Nederland B.V.	8-inch Gas pipeline	4	Y	N	N
Goldeneye to St. Fergus	Peterhead	Peterhead CCS (Shell and SSE)	CSS pipeline	5	Y	Y	N

12.3.10 Carbon capture projects

42. Carbon capture projects considered in the CIA screening were tier 1-3 for UK based projects. All European projects were screened out.
43. No projects were identified in tier 2 or 3, and all of the tier 1 projects identified by screening were already active, and are therefore considered part of the baseline. Tier 4 and 5 projects were screened out, including the Endurance and Goldeneye projects as both are tier 5. Therefore all carbon capture projects have been screened out of the CIA.

12.3.11 Summary

44. Table 12.9 summaries the results of the CIA screening process.

Table 12.9 Number of plans or project from each category which have been screened into the CIA for each receptor and the stage of the plan or project where a cumulative impact may occur (C = commissioning / construction O = operation, D = decommissioning, N/A = not assessed as there is no pathway)

Project category	Harbour porpoise			Grey seal			Harbour seal		
	C	O	D	C	O	D	C	O	D
Other UK offshore windfarms	14	51	52	13	34	35	13	32	32
European offshore windfarms	7	66	66	7	57	57	7	57	57
Other renewable developments (tidal and wave)	3	9	9	0	0	0	0	0	0
Subsea cables and pipelines	15	N/A	N/A	11	N/A	N/A	10	N/A	N/A

ANNEX 1 - Initial List of UK and European Offshore Wind Farms considered within the CIA Screening

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Belwind 1	Belgium	1	Commissioned	Y	Y	Y
Belwind 2 (zone 3, Bligh Bank)	Belgium	1	Commissioned	Y	N	N
Belwind Alstom Haliade Demonstration	Belgium	1	Commissioned	Y	Y	Y
Mermaid	Belgium	3	Consented	Y	Y	Y
Nobelwind	Belgium	1	Construction	Y	Y	Y
Norther	Belgium	3	Pre-Construction	Y	Y	Y
Northwester 2	Belgium	3	Consented	Y	Y	Y
Northwind	Belgium	1	Commissioned	Y	Y	Y
Poseidon P60 - Mermaid	Belgium	5	Concept & Early Planning	Y	Y	Y
RENTEL	Belgium	3	Pre-Construction	Y	Y	Y
SeaStar	Belgium	3	Consented	Y	Y	Y
Thornton Bank phase I	Belgium	1	Commissioned	Y	Y	Y
Thornton Bank phase II	Belgium	1	Commissioned	Y	Y	Y
Thornton Bank phase III	Belgium	1	Commissioned	Y	Y	Y
Avedøre Holme	Denmark	1	Fully Commissioned	N	N	N
Haliade	Denmark	1	Commissioned	Y	N	N
Horns Rev 1	Denmark	1	Commissioned	Y	Y	Y
Horns Rev 2	Denmark	1	Commissioned	Y	Y	Y
Horns Rev 3	Denmark	3	Pre-Construction	Y	Y	Y
Horns Rev 4	Denmark	5	Development Zone	Y	Y	Y
Horns Rev B HR5	Denmark	5	Development Zone	N	N	N
Horns Rev B HR6	Denmark	5	Development Zone	Y	Y	Y
Horns Rev B HR7	Denmark	5	Development Zone	Y	Y	Y
Horns Rev Reserved Area	Denmark	5	Development Zone	Y	Y	Y
Jammerbugt A J1	Denmark	5	Development Zone	Y	N	N
Jammerbugt A J2	Denmark	5	Development Zone	Y	N	N
Jammerbugt A J3	Denmark	5	Development Zone	Y	N	N
Jammerbugt A J4	Denmark	5	Development Zone	Y	N	N
Jammerbugt B J1	Denmark	5	Development Zone	Y	N	N
Jammerbugt B J2	Denmark	5	Development Zone	Y	N	N
Jammerbugt Reserved Area	Denmark	5	Development Zone	Y	N	N
Jammerland Bugt	Denmark	4	Consent Application Submitted	N	N	N
Kriegers Flak	Denmark	3	Consent Application Submitted	N	N	N
Kriegers Flak B K1	Denmark	5	Development Zone	N	N	N
Kriegers Flak Reserved Area	Denmark	5	Development Zone	N	N	N
Mejflak	Denmark	4	Application submitted	N	N	N

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Middelgrunden	Denmark	1	Fully Commissioned	N	N	N
Nisum Bredning Vind	Denmark	3	Pre-Construction	Y	N	N
Nysted	Denmark	1	Fully Commissioned	N	N	N
Ringkøbing Fjord A RK1	Denmark	5	Development Zone	Y	N	N
Ringkøbing Fjord A RK2	Denmark	5	Development Zone	Y	N	N
Ringkøbing Fjord A RK3	Denmark	5	Development Zone	Y	N	N
Ringkøbing Fjord A RK4	Denmark	5	Development Zone	Y	N	N
Ringkøbing Fjord A RK5	Denmark	5	Development Zone	Y	N	N
Ringkøbing Reserved Area	Denmark	5	Development Zone	Y	N	N
Rønland (Nisum Bredning)	Denmark	1	Commissioned	Y	N	N
Samsø	Denmark	1	Commissioned	N	N	N
Sejerø Bugten	Denmark	5	Development Zone	N	N	N
Sprogø	Denmark	1	Fully Commissioned	N	N	N
Tunø Knob	Denmark	1	Commissioned	N	N	N
Vesterhav Nord	Denmark	3	Consented	Y	N	N
Vesterhav Syd	Denmark	3	Consented	Y	N	N
Eoliennes des Hautes Falaises	France	4	Application submitted	Y	N	N
Eoliennes du Calvados	France	4	Application submitted	Y	N	N
Future Commercial Floating Tenders	France	5	Development Zone	Y	Y	Y
Future Fixed-Bottom Tenders	France	5	Development Zone	Y	Y	Y
InFLOW (INDustrialization setup of a FLOATING Offshore Wind turbine)	France	4	Consent Authorised	N	N	N
L'eolien en mer region Dunkerque	France	5	Development Zone	Y	Y	Y
Parc eolien en mer de Dieppe - Le Treport	France	5	Concept & Early Planning	Y	N	N
Parc éolien en mer de Fécamp	France	4	Consent Application Submitted	Y	N	N
SEM-REV - SITE D'EXPERIMENTATION EN MER - MARINE TEST SITE	France	1	Fully Commissioned	N	N	N
WIN 2	France	5	Cancelled	Y	N	N
Aiolos	Germany	4	Application submitted	Y	Y	Y
Albatros	Germany	5	Consented but no grid allocation. Status of consent unknown and re-application possible.	Y	N	N
Alpha Ventus	Germany	1	Commissioned	Y	Y	Y
Amrumbank West	Germany	1	Commissioned	Y	Y	Y
Apollon	Germany	4	Consent Application Submitted	Y	N	N
AreaC I	Germany	5	Dormant	Y	Y	Y
AreaC II	Germany	5	Dormant	Y	Y	Y
AreaC III	Germany	5	Dormant	Y	Y	Y
Atlantis I	Germany	4	Application submitted	Y	Y	Y

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Atlantis II	Germany	5	Dormant	Y	Y	Y
Atlantis III	Germany	5	Dormant	Y	Y	Y
Austerngrund	Germany	5	Dormant	Y	Y	Y
BARD Offshore 1	Germany	1	Commissioned	Y	Y	Y
Blight Power I	Germany	5	Dormant	Y	Y	Y
Blight Power II	Germany	5	Dormant	Y	Y	Y
Borkum Riffgrund I	Germany	1	Commissioned	Y	Y	Y
Borkum Riffgrund II	Germany	3	Pre-Construction	Y	Y	Y
Borkum Riffgrund West I	Germany	3	Consented	Y	Y	Y
Borkum Riffgrund West II	Germany	4	Application submitted	Y	Y	Y
Butendiek (Offshore- Bürger- windpark)	Germany	1	Commissioned	Y	N	N
Concordia I	Germany	5	Dormant	Y	Y	Y
Concordia II	Germany	5	Dormant	Y	Y	Y
Dan Tysk	Germany	1	Commissioned	Y	Y	Y
Delta Nordsee 1	Germany	3	Consented	Y	Y	Y
Delta Nordsee 2 (OWP Delta Nordsee 2)	Germany	3	Consented	Y	Y	Y
Deutsche Bucht	Germany	3	Consented	Y	Y	Y
Diamant	Germany	5	Dormant	Y	Y	Y
EnBW Baltic 1	Germany	1	Commissioned	Y	Y	Y
EnBW Baltic 2	Germany	1	Commissioned	Y	Y	Y
EnBW He Dreiht	Germany	3	Consented	Y	Y	Y
EnBW Hohe See (Hochsee Windpark 'Nordsee')	Germany	3	Consented	Y	Y	Y
ENOVA Ems Emden	Germany	1	Commissioned	Y	Y	Y
ENOVA NSWP 10	Germany	5	Dormant	Y	Y	Y
ENOVA NSWP 11	Germany	5	Dormant	Y	Y	Y
ENOVA NSWP 12	Germany	5	Dormant	Y	Y	Y
ENOVA NSWP 13	Germany	5	Dormant	Y	Y	Y
ENOVA NSWP 14	Germany	5	Dormant	Y	Y	Y
ENOVA NSWP 15	Germany	5	Dormant	Y	Y	Y
ENOVA NSWP 8	Germany	5	Dormant	Y	Y	Y
ENOVA NSWP 9	Germany	5	Dormant	Y	Y	Y
Euklas	Germany	5	Dormant	Y	Y	Y
GAIA I	Germany	5	Dormant	Y	Y	Y
GAIA II	Germany	5	Dormant	Y	Y	Y
GAIA III	Germany	5	Dormant	Y	Y	Y
GAIA IV	Germany	5	Dormant	Y	Y	Y
GAIA V	Germany	5	Dormant	Y	Y	Y
Gannet	Germany	5	Dormant	Y	Y	Y
GICON SOF (test turbine)	Germany	5	Concept & Early Planning	Y	Y	Y

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Global Tech I	Germany	1	Commissioned	Y	Y	Y
Global Tech II	Germany	4	Application submitted	Y	Y	Y
Global Tech III	Germany	4	Application submitted	Y	N	N
Gode Wind 03	Germany	3	Application submitted	Y	Y	Y
Gode Wind 04	Germany	3	Consented	Y	Y	Y
Gode Wind 1 and 2	Germany	1	Construction	Y	Y	Y
H2-20	Germany	5	Dormant	Y	Y	Y
He dreiht II	Germany	4	Application submitted	Y	Y	Y
Heron	Germany	5	Dormant	Y	Y	Y
Hooksiel	Germany	1	Decommissioned	Y	Y	Y
Horizont I	Germany	5	Dormant	Y	Y	Y
Horizont II	Germany	5	Dormant	Y	Y	Y
Horizont III	Germany	5	Dormant	Y	Y	Y
Horizont IV	Germany	5	Dormant	Y	Y	Y
HTOD 1	Germany	5	Dormant	Y	Y	Y
HTOD 2	Germany	5	Dormant	Y	Y	Y
HTOD 3	Germany	5	Dormant	Y	Y	Y
HTOD 4	Germany	5	Dormant	Y	Y	Y
HTOD 5	Germany	5	Dormant	Y	Y	Y
HTOD 6	Germany	5	Dormant	Y	Y	Y
Jules Verne	Germany	5	Dormant	Y	Y	Y
Kaikas	Germany	5	Dormant	Y	Y	Y
Kaskasi II	Germany	4	Application submitted	Y	Y	Y
Meerwind Ost Sud	Germany	1	Commissioned	Y	Y	Y
Meerwind West	Germany		Dormant	Y	Y	Y
MEG offshore 1	Germany	5	Consented but no grid allocation. Status of consent unknown and re-application possible.	Y	N	N
Merkur	Germany	3	Pre-Construction	Y	Y	Y
Nautilus I	Germany	5	Dormant	Y	Y	Y
Nemo	Germany	5	Dormant	Y	Y	Y
Neptune I	Germany	5	Dormant	Y	Y	Y
Neptune II	Germany	5	Dormant	Y	Y	Y
Neptune III	Germany	5	Dormant	Y	Y	Y
Nordergrunde	Germany	2	Construction	Y	Y	Y
Norderland	Germany	5	Dormant	Y	Y	Y
Nordlicher Grund	Germany	3	Consented	Y	Y	Y
Nordlicher Grund Teil Sandbank	Germany	1	Operational	Y	N	N
Nord-Ost Passat I	Germany	5	Dormant	Y	Y	Y
Nord-Ost Passat II	Germany	5	Dormant	Y	Y	Y

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Nord-Ost Passat III	Germany	5	Dormant	Y	Y	Y
Nordpassage	Germany	5	Dormant	Y	Y	Y
Nordsee 2 (Innogy Nordsee II)	Germany	3	Consented	Y	Y	Y
Nordsee 3 (Innogy Nordsee III)	Germany	3	Consented	Y	Y	Y
Nordsee One (Innogy Nordsee I)	Germany	2	Construction	Y	Y	Y
Nordsee Ost	Germany	1	Commissioned	Y	Y	Y
OWP Albatros Phase 1	Germany	3	Consented	Y	Y	Y
OWP Albatros Phase 2	Germany	3	Consented	Y	Y	Y
OWP West	Germany	3	Consented	Y	Y	Y
Petrel	Germany	5	Dormant	Y	Y	Y
PROWIND 1	Germany	5	Dormant	Y	Y	Y
PROWIND 2	Germany	5	Dormant	Y	Y	Y
PROWIND 3	Germany	5	Dormant	Y	Y	Y
Riffgat	Germany	1	Commissioned	Y	Y	Y
Sandbank	Germany	1	Construction (partial operation)	Y	Y	Y
Sandbank Extension	Germany	4	Application submitted	Y	Y	Y
Sandbank Plus	Germany	3	Consented	Y	Y	Y
Seagull	Germany	5	Dormant	Y	Y	Y
SeaStorm I	Germany	5	Dormant	Y	Y	Y
SeaStorm II	Germany	5	Dormant	Y	Y	Y
SeaWind III	Germany	5	Dormant	Y	Y	Y
SeaWind IV	Germany	5	Dormant	Y	Y	Y
Skua	Germany	5	Dormant	Y	Y	Y
Strom-Nord	Germany	4	Application submitted	Y	Y	Y
Trianel Windpark Borkum Phase 1 (Borkum West II phase 1)	Germany	1	Commissioned	Y	Y	Y
Trianel Windpark Borkum Phase 2 (aka Borkum West II phase 2)	Germany	3	Consented	Y	Y	Y
Veja Mate	Germany	1	Commissioned	Y	Y	Y
Witte Bank	Germany	5	Dormant	Y	Y	Y
Borssele I and II	Netherlands	3	Consented	Y	Y	Y
Borssele III and IV	Netherlands	3	Consented	Y	Y	Y
Borssele Site V - Leeghwater - Innovation Plot	Netherlands	3	Consented	Y	Y	Y
Buitengaats	Netherlands		Construction			
Callantsoog Noord	Netherlands	5	Failed to gain consent	Y	Y	Y
Clearcamp	Netherlands	5	Dormant	Y	Y	Y
Den Haag I	Netherlands	5	Failed to gain consent	Y	Y	Y
Den Haag II	Netherlands	5	Failed to gain consent	Y	Y	Y
Egmond aan Zee (aka OWEZ)	Netherlands	1	Commissioned	Y	Y	Y
Eneco Luchterduinen	Netherlands	1	Commissioned	Y	Y	Y

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Gemini	Netherlands	1	Construction (partial operation)	Y	Y	Y
Hollandse Kust Noord Holland I	Netherlands	5	Tender 2019	Y	Y	Y
Hollandse Kust Noord Holland II	Netherlands	5	Tender 2019	Y	Y	Y
Hollandse Kust Zuid Holland I	Netherlands	5	Tender 2017	Y	Y	Y
Hollandse Kust Zuid Holland II	Netherlands	5	Tender 2017	Y	Y	Y
Hollandse Kust Zuid Holland III	Netherlands	5	Tender 2018	Y	Y	Y
Hollandse Kust Zuid Holland IV	Netherlands	5	Tender 2018	Y	Y	Y
Ijmuiden	Netherlands	5	Development Zone	Y	Y	Y
Irene Vorrink	Netherlands	1	Commissioned	Y	Y	Y
Leeghwater - Turbine Demonstration Facility	Netherlands	3	Consent Authorised	Y	N	N
Lely	Netherlands	1	Decommissioned	Y	Y	Y
Nord-Holland boven Noordzeekanaal Potentiele Zoekgebieden	Netherlands	5	Development Zone	Y	N	N
Okeanos	Netherlands	5	Failed to gain consent	Y	Y	Y
P12	Netherlands	5	Failed to gain consent	Y	Y	Y
Prinses Amalia Windpark (formerly Q7)	Netherlands	1	Commissioned	Y	Y	Y
Rijnveld Noord	Netherlands	5	Failed to gain consent	Y	Y	Y
Rijnveld Oost	Netherlands	5	Failed to gain consent	Y	Y	Y
Rijnveld West	Netherlands	5	Failed to gain consent	Y	Y	Y
Rotterdam Noord-West	Netherlands	5	Failed to gain consent	Y	Y	Y
South Holland Coast Wind Farm Zone Phase II	Netherlands	5	Tender: 2018	Y	N	N
Voorde Hollandse kust Zoekgebieden	Netherlands	5	Development Zone	Y	Y	Y
Westermeerwind	Netherlands	1	Commissioned	Y	Y	Y
Windpark Fryslân	Netherlands	4	Consent Application Submitted	Y	Y	Y
Zeeuws Offshore Wind Project	Netherlands	5	Pre-planning Application	Y	N	N
Zuid-en Noord-Holland onder het Noordzeekanaal Potentiele Zoekgebieden	Netherlands	5	Development Zone	Y	N	N
Auvær (Category B area)	Norway	5	Development Zone	N	N	N
Frøyabanken (Category B area)	Norway	5	Development Zone	N	N	N
Frøyagrunnene (Category A area)	Norway	5	Development Zone	Y	N	N
Gwind - Spinwind 1	Norway		Decommissioned	Y	N	N
Gwind - Spinwind 2	Norway	5	Concept/Early Planning	Y	N	N
Havsul I	Norway	5	Dormant	N	N	N
Havsul II	Norway	5	Failed Proposal	N	N	N
Havsul IV	Norway	5	Failed Proposal	N	N	N
Hywind - Metcentre	Norway	1	Fully Commissioned	Y	N	N
Kvitsøy Wind Turbine Demonstration Area	Norway	3	Consent Authorised	Y	N	N

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Karnoy Marine Energy Test Centre (Metcentre)	Norway	3	Consent Authorised	Y	N	N
Ming Yang 6MW Demo - Metcentre	Norway	5	Cancelled	Y	N	N
Nord Øyan - Ytre Vikna (Category B area)	Norway	5	Development Zone	N	N	N
Olderveggen (Category B area)	Norway	5	Development Zone	Y	N	N
Rennesøy Wind Turbine Demonstration Area	Norway	3	Consent Authorised	Y	N	N
Siragrunnen	Norway	5	Failed Proposal	Y	N	N
Sørilige Nordsjø I (Category A area)	Norway	5	Development Zone	Y	N	N
Sørilige Nordsjø II (Category A area)	Norway	5	Development Zone	Y	N	N
Stadthavet (Category B area)	Norway	5	Development Zone	N	N	N
SWAY 1:6 Prototype	Norway	5	Decommissioned	Y	N	N
SWAY 2.6MW Test	Norway	5	Cancelled	Y	N	N
Testområde Bukketjuvane	Norway	5	Dormant	Y	N	N
Træna vest (Category B area)	Norway	5	Development Zone	Y	N	N
Trænafjorden - Selvær (Category B area)	Norway	5	Development Zone	N	N	N
Utsira nord (Category A area)	Norway	5	Development Zone	Y	N	N
Utsira Phase 1	Norway	5	Dormant	Y	N	N
Vannøya nordøst (Category B area)	Norway	5	Development Zone	N	N	N
WindSea AS Prototype	Norway	5	Concept/Early Planning	N	N	N
Hakefjorden - Vindplats Göteborg	Sweden	5	Failed Proposal	Y	N	N
Kattegatt Offshore	Sweden	3	Consent Authorised	Y	N	N
SeaTwirl 10MW	Sweden	5	Concept/Early Planning	Y	N	N
SeaTwirl 1MW	Sweden	5	Concept/Early Planning	Y	N	N
SeaTwirl 3MW	Sweden	5	Concept/Early Planning	Y	N	N
SeaTwirl P3	Sweden	5	Decommissioned	Y	N	N
SeaTwirl S1	Sweden	1	Fully Commissioned	Y	N	N
Skottarevsprojektet	Sweden	5	Failed Proposal	N	N	N
Stora Middelgrund	Sweden	3	Consent Authorised	N	N	N
Aberdeen	UK	2	Construction	Y	N	N
Beatrice	UK	3	Pre-Construction	Y	N	N
Beatrice - demonstrator project	UK	1	Decommissioned	Y	N	N
Blyth	UK	1	Decommissioned	Y	Y	Y
Blyth demonstration site (1) (NaREC)	UK	2	Construction	Y	Y	Y
Blyth demonstration site (2) (NaREC)	UK	2	Construction	Y	Y	Y
Blyth demonstration site (3A & 4) (NaREC)	UK	3	Consented	Y	Y	Y
Burbo Bank	UK	1	Operational	Y	Y	Y
Burbo Bank Extension	UK	1	Construction	Y	Y	Y

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Dogger Bank Zone Creyke Beck A	UK	3	Consented	Y	Y	Y
Dogger Bank Zone Creyke Beck B	UK	3	Consented	Y	Y	Y
Dogger Bank Zone Teesside A	UK	3	Consented	Y	Y	Y
Dogger Bank Zone Teesside B	UK	3	Consented	Y	Y	Y
Dogger Bank Zone Teesside C	UK	0	Cancelled	Y	Y	Y
Dogger Bank Zone Teesside D	UK	0	Cancelled	Y	Y	Y
Dounreay Ti	UK	3	Pre-construction	Y	N	N
Dudgeon	UK	2	Construction	Y	Y	Y
East Anglia 1N	UK	5	Concept & Early Planning	Y	Y	Y
East Anglia FOUR	UK	0	Withdrawn			
East Anglia One	UK	3	Pre-Construction	Y	Y	Y
East Anglia THREE	UK	4	Consented	Y	Y	Y
East Anglia TWO	UK	5	Concept & Early Planning	Y	Y	Y
European Offshore Wind Deployment Centre EOWDC (Aberdeen Demonstration)	UK	3	Consented	Y	N	N
Firth of Forth Phase 1 Seagreen Alpha	UK	3	Consented	Y	N	N
Firth of Forth Phase 1 Seagreen Bravo	UK	3	Consented	Y	N	N
Firth of Forth Phase 2 Delta	UK	5	Concept & Early Planning	Y	N	N
Firth of Forth Phase 2 Echo	UK	5	Concept & Early Planning	Y	N	N
Firth of Forth Phase 3 Foxtrot	UK	5	Concept & Early Planning	Y	N	N
Firth of Forth Phase 3 Golf	UK	5	Concept & Early Planning	Y	N	N
Firth of Forth Seagreen Phase 2 Charlie	UK	5	Concept & Early Planning	Y	N	N
ForthWind Offshore Wind Demo Project (2-B Energy Test Site)	UK	5	Concept & Early Planning	Y	N	N
Gallopier	UK	2	Construction	Y	Y	Y
Greater Gabbard	UK	1	Operational	Y	Y	Y
Gunfleet Sands 3 (Demo Zone)	UK	1	Operational	Y	Y	Y
Gunfleet Sands I	UK	1	Operational	Y	Y	Y
Hornsea Project Four	UK	5	Concept & Early Planning	Y	Y	Y
Hornsea Project One	UK	2	Pre-Construction/ Construction	Y	Y	Y
Hornsea Project Three	UK	5	Concept & Early Planning	Y	Y	Y
Hornsea Project Two	UK	3	Consented	Y	Y	Y
Humber Gateway	UK	1	Operational	Y	Y	Y
Hywind 2 (NB project will not pile foundations)	UK	4	Application submitted	Y	N	N
Hywind 2 Demonstration	UK	2	Construction	Y	N	N
Hywind Pilot Park	UK	3	Pre-Construction	Y	N	N
Ideol/Atlantis Energy 1.5 Floating Project	UK	5	Pre-planning Application	Y	N	N
Ideol/Atlantis Energy 1.5 Floating Project - Phase One	UK	5	Pre-planning Application	Y	N	N

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Inch Cape	UK	4	Consented	Y	N	N
Inner Dowsing	UK	1	Operational	Y	Y	Y
Kentish Flats	UK	1	Operational	Y	Y	Y
Kentish Flats Extension	UK	1	Operational	Y	Y	Y
Kincardine	UK	3	Consented	Y	N	N
Levenmouth (Demo)	UK	1	Operational	Y	N	N
Lincs	UK	1	Operational	Y	Y	Y
London Array	UK	1	Operational	Y	Y	Y
London Array phase 2	UK	0	Cancelled	Y	Y	Y
Lynn	UK	1	Operational	Y	Y	Y
Methil Demo Project	UK	5	Concept & Early Planning	Y	N	N
Methil Samsung	UK	1	Commissioned	Y	N	N
Moray Firth Eastern Development Area 1	UK	2	Construction	Y	N	N
Moray Firth Eastern Development Area 2	UK	3	Consented (Financial Decision Awaiting)	Y	N	N
Moray Firth Western Development Area	UK	5	Concept & Early Planning	Y	N	N
MORL MacColl	UK	3	Consented	Y	N	N
MORL Stevenson	UK	3	Consented	Y	N	N
MORL Telford	UK	3	Consented	Y	N	N
Neart na Gaoithe	UK	3	Pre-Construction	Y	N	N
Norfolk Boreas	UK	5	Concept & Early Planning	Y	Y	Y
Norfolk Vanguard	UK	5	Concept & Early Planning	Y	Y	Y
OWN1 (North of Orkney)	UK	6	Development Zone	Y	N	N
OWN2 (East of Shetland)	UK	6	Development Zone	Y	N	N
OWNE1 (East Coast Aberdeenshire)	UK	6	Development Zone	Y	N	N
OWNE2 (North coast of Aberdeenshire)	UK	6	Development Zone	Y	N	N
Race Bank	UK	2	Construction	Y	Y	Y
Rampion (Southern Array)	UK	2	Construction	Y	N	N
Rampion Wind Farm	UK	2	Construction	Y	N	N
Scroby Sands	UK	1	Operational	Y	Y	Y
Sheringham Shoal	UK	1	Operational	Y	Y	Y
Site 1 Southern Moray Firth	UK	6	Development Zone	Y	N	N
Site 3 East Aberdeen	UK	6	Development Zone	Y	N	N
Site 5 South East Aberdeen	UK	6	Development Zone	Y	N	N
Site 6 East Shetland Site	UK	6	Development Zone	Y	N	N
Teesside	UK	1	Operational	Y	Y	Y
Thanet	UK	1	Operational	Y	Y	Y
Thanet Extension	UK	5	Concept & Early Planning	Y	Y	Y
TLPWIND UK	UK	5	Concept & Early Planning	Y	N	N

Name of Project	Country	Tier	Status	Within Species MU		
				HP	GS	HS
Triton Knoll phase 1-3	UK	3	Consented	Y	Y	Y
Westermost Rough	UK	1	Operational	Y	Y	Y

Annex 2 - Initial List of UK Wave and Tidal Projects considered within the CIA Screening

Name of Project	Type of project	Distance from NV (km)	Status	Tier	Within Species MU		
					HP	GS	HS
Bernera	Wave	960	Pre-construction	3	N	N	N
Bluemell Sound	Tidal	879.02	Operational	1	Y	N	N
Brims tidal array (formerly Cantick Head)	Tidal	729.42	Application submitted	4	Y	N	N
Brough Head (Aquamarine Power)	Wave	759.01	In development	5	Y	N	N
Cardiff Tidal Lagoon	Tidal	1,010	Application submitted	4	N	N	N
Costa Head	Wave	780	Cancelled	1	Y	N	N
EMEC - Billia Croo	Wave	755.5	Operational	1	Y	N	N
EMEC Fall of Warness	Tidal	754.66	Operational	1	Y	N	N
EMEC Shapinsay Sound	Tidal	743.94	Operational	1	Y	N	N
Fabtest Fred Olsen	Wave	680	Complete	1	N	N	N
Fabtest OWEL	Wave	680	Pre-construction	3	N	N	N
Fair Head	Tidal	1,250	In development	5	N	N	N
Farr Point	Wave	794	Cancelled	1	N	N	N
Galson	Wave	960	Pre-construction	3	N	N	N
Harris Demo Zone	Wave	960	In development	5	N	N	N
Holyhead Deep	Tidal	1,130	In development	5	N	N	N
Humber Pulse Tidal	Tidal	219	Decommissioned	1	Y	Y	Y
Inner Sound - MeyGen	Tidal	717.93	Operational	1	Y	N	N
Islay Demo Zone	Tidal	1,200	In development	5	N	N	N
Lashy Sound (1 & 2)	Tidal	760.3	Pre-Scoping	5	Y	N	N
Marwick Head	Wave	780	Cancelled	1	Y	N	N
Minesto Strangford Loch	Tidal	1,260	Operational	1	N	N	N
Morlais	Tidal	1,130	In development	5	N	N	N
Mull of Galloway	Tidal	1,260	In development	5	N	N	N
Mull of Kintyre	Tidal	1,250	Pre-construction	3	N	N	N
Ness of Duncansby	Tidal	715.41	Pre-Scoping	5	Y	N	N
North Cornwall Demo Zone	Wave	840	In development	5	N	N	N
North Devon Demo Zone	Tidal	950	In development	5	N	N	N
North Yell	Tidal	900	Operational	1	Y	N	N
North-West Lewis	Wave	960	Pre-construction	3	N	N	N
Pendeen Array	Wave	830	In development	5	N	N	N
Perpetuus Tidal Energy Centre (PTEC)	Tidal	356.26	Consented	3	Y	N	N
Pontnahaven	Wave	1,200	Operational	1	N	N	N
Portland Bill Tidal Site	Tidal	480	In development	5	Y	N	N
Ramsey Sound	Tidal	970	Operational	1	N	N	N
Sanda Sound	Tidal	1,250	Operational	1	N	N	N
Scapa Flow	Wave	736	Operational	1	Y	N	N

Name of Project	Type of project	Distance from NV (km)	Status	Tier	Within Species MU		
					HP	GS	HS
Scilly Airport WEP	Wave	750	Application submitted	4	N	N	N
Seagen Brough Ness	Tidal	719.35	In development	5	Y	N	N
Seagen Kyle Rhea	Tidal	1,030	On hold	5	N	N	N
Seagen Skerries	Tidal	1,130	On hold	5	N	N	N
Seagen Stragford Loch	Tidal	1,260	Operational	1	N	N	N
Sound of Islay	Tidal	1,200	Pre-construction	3	N	N	N
South Pembrokeshire Demo Zone	Wave	925	In development	5	N	N	N
St Davids Head	Tidal	970	In development	5	N	N	N
Stronsay Firth	Tidal	744.06	In development	5	Y	N	N
Swansea Bay Tidal Lagoon	Tidal	980	Pre-construction	3	N	N	N
Torr Head	Tidal	1,250	In development	5	N	N	N
Wave Hub (Carnegie)	Wave	830	In development	5	N	N	N
Wave Hub (Fortum)	Wave	830	In development	5	N	N	N
Wave Hub (Seatricity 1)	Wave	830	Operational	1	N	N	N
Wave Hub (Seatricity 2)	Wave	830	In development	5	N	N	N
Wave Hub (Simply Blue)	Wave	830	In development	5	N	N	N
West Islay Tidal Energy Park	Tidal	1,200	Application submitted	4	N	N	N
West Orkney Middle South	Wave	780	Cancelled	1	Y	N	N
West Orkney South	Wave	780	In development	5	Y	N	N
Westray South	Tidal	758.57	Application in prep	5	Y	N	N