Royal HaskoningDHV
Enhancing Society Together

VATTENFALL

Norfolk Vanguard Offshore Wind Farm

Schedule of Mitigation

Applicant: Norfolk Vanguard Limited
Document Reference: 6.5
Pursuant to: APFP Regulation: 5(2)(q)

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

Photo: Kentish Flats Offshore Wind Farm

Document Reference: 6.5

June 2018

For and on behalf of Norfolk Vanguard Ltd

Approved by: Ruari Lean, Rebecca Sherwood

Signed:

[redacted]

For and on behalf of Royal HaskoningDHV

Drafted by: Gemma Keenan and Sophie Thompson

Approved by: Alistair Davison

Signed: [redacted]

Date: 8th June 2018

Date	Issue No.	Remarks / Reason for Issue	Author	Checked	Approved
09/03/18	01D	First draft for NV Ltd review	ST/KC	GK	PP
04/05/18	02D	Second draft for NV Ltd review	BD	GK/ST	AH
08/06/18	01F	Final for NV Ltd review	BD	GK/ST	AH
10/06/18	02F	Final for ES submission	BD	GK/ST	AH

Table of Contents

Tables

Glossary

ADD	Acoustic Deterrent Device
AEZ	Archaeological Exclusion Zone
ALC	Agricultural Land Classification
ALO	Agricultural Liaison Officer
BAT	Best Available Technique
BPM	Best Practical Means
BWMP	Ballast Water Management Plan
CAA	Civil Aviation Authority
CCS	Construction Consolidation Site
CLC	Construction Liaison Committee
CMS	Construction Method Statement
CoCP	Construction Code of Practice
COLREGS	International Regulations for Preventing Collisions at Sea
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DGC	Defence Geographic Centre
DWR	Deep Water Routes
ECoW	Ecological Clerk of Works
EMF	Electromagnetic Fields
ERCoP	Emergency Response Cooperation Plan
GAAC	General Aviation Awareness Council
HAT	Highest astronomical tide
HDD	Horizontal Directional Drilling
HE	Historic England
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HMR	Helicopter Main Route
HRA	Habitat Regulation Assessment
HVDC	High Voltage Direct Current
IALA	International Association of Lighthouse Authorities
IPMP	In Principle Monitoring Plan
LCV	Light Commercial Vehicle
MARPOL	International Convention for the Prevention of Pollution from Ships
MCA	Marine & Coastguard Agency
MCZ	Marine Conservation Zone
MHWS	Mean high water springs

MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
MMP	Materials Management Plan
MOD	Ministry of Defence
MPCP	Marine Pollution Contingency Plan
NATS	National Air Traffic Service
NOTAM	Notice to Airmen
NPPF	National Planning Policy Framework
NPS	National Planning Statement
NtM	Notice to Mariners
OLEMS	Outline landscape and ecological management strategy
OOCEMP	Outline Offshore Construction Environmental Management Plan
ORPAD	Offshore Renewables Protocol for Archaeological Discoveries
PEMP	Project Environmental Management Plan
PMOW	Precautionary Method of Working
PPE	Personal Protective Equipment
PPG	Pollution Prevention Guidance
PRoW	Public Rights of Way
PTS	Permanent Threshold Shift
RDD	Radar Detector Detectors
ROV	Remotely Operated Vehicle
RPE	Respiratory Protective Equipment
SAC	Special Area of Conservation
SAR	Search and Rescue
SCI	Sites of Community Importance
SIP	Site Integrity Plan
SMP	Soil Management Plan
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Urban Drainage
SWDMP	Surface Water and Drainage Management Plan
SWMP	Site and Excavated Waste Management Plan
TH	Trinity House
TMP	Traffic Management Plan
TP	Travel Plan
UKHO	UK Hydrographic Office
UXO	Unexploded Ordnance
VMP	Vessel Management Plan

WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator

Terminology

Array cables	Cables which link the wind turbines and the offshore electrical platform.
Attenuation pond zone	Zone within which the attenuation pond at the onshore project substation or Necton National Grid substation will be located.
Export capacity	Maximum power transfer from the wind farm into the National Electricity Transmission System (NETS) (i.e. at the offshore transmission entry point)
Indicative mitigation planting	Areas identified for mitigation planting at the onshore project substation and Necton National Grid substation.
Interconnector cables	Buried offshore cables which link the offshore electrical platforms
Jointing pit	Underground structures constructed at regular intervals along the cable route to join sections of cable and facilitate installation of the cables into the buried ducts
Landfall	Where the offshore cables come ashore at Happisburgh South
Landfall compound	Compound at landfall within which HDD drilling would take place
Link boxes	Underground chambers or above ground cabinets next to the cable trench housing low voltage electrical earthing links.
Mobilisation area	Areas approx. 100 x 100m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.
Mobilisation zone	Area within which the mobilisation area will be located.
National Grid new / replacement overhead line tower	New overhead line towers to be installed at the National Grid substation.
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400kV overhead lines
National Grid substation extension	The permanent footprint of the National Grid substation extension
National Grid temporary works area	Land adjacent to the Necton National Grid substation which would be temporarily required during construction of the National Grid substation extension.
Necton National Grid substation	The existing 400kV substation at Necton, which will be the grid connection location for Norfolk Vanguard
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
Onshore 400kV cable route	Buried high-voltage cables linking the onshore project substation to the Necton National Grid substation
Onshore cable corridor	200m wide onshore corridor within which the onshore cable route would be located as submitted for PEIR.
Onshore cable route	The 45m easement which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.
Onshore cables	The cables which take the electricity from landfall to the onshore project substation
Onshore project area	All onshore electrical infrastructure (landfall; onshore cable route, accesses, trenchless crossing technique (e.g. Horizontal Directional Drilling (HDD)) zones and mobilisation areas; onshore project substation and extension to the Necton National Grid substation and overhead line modification)
Onshore project substation	A compound containing electrical equipment to enable connection to the National Grid. The substation will convert the exported power from HVDC to HVAC, to 400kV (grid voltage). This also contains equipment to help maintain stable grid voltage.
Onshore project substation temporary construction compound	Land adjacent to the onshore project substation which would be temporarily required during construction of the onshore project substation.
Running track	The track along the onshore cable route which the construction traffic would use to access workfronts
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
Transition pit	Underground structures that house the joints between the offshore export cables and the onshore cables within the landfall
Trenchless crossing zone (e.g. HDD)	Temporary areas required for trenchless crossing works.

This page is intentionally blank.

1 INTRODUCTION

1.1 Background

1. Norfolk Vanguard Limited ('the Applicant' an affiliate company of Vattenfall Wind Power Ltd (VWPL)) is seeking a Development Consent Order for Norfolk Vanguard, an offshore wind farm (OWF) in the southern North Sea (herein 'Norfolk Vanguard' or 'the project').

2. The OWF comprises two distinct areas, Norfolk Vanguard East (NV East) and Norfolk Vanguard West (NV West) ('the OWF sites'), within which wind turbines, associated platforms and array cables will be located. The offshore wind farm will be connected to the shore by offshore export cables installed within the offshore cable corridor from the wind farm to a landfall point at Happisburgh South, Norfolk. From there onshore cables would transport power over approximately 60km to the onshore project substation at Necton, Norfolk. A full project description is given in the Environmental Statement, Chapter 5 Project Description.

3. Once built, Norfolk Vanguard would have an export capacity of up to 1800MW, with the offshore components comprising:

   - Wind turbines;
   - Offshore electrical platforms;
   - Accommodation platforms;
   - Met masts;
   - Measuring equipment (LiDAR and wave buoys);
   - Array cables;
   - Inter-connector cables; and
   - Export cables.

4. The key onshore components of the project are as follows:

   - Landfall;
   - Onshore cable route, accesses, trenchless crossing (e.g. Horizontal Directional Drilling (HDD)) zones and mobilisation areas;
   - Onshore project substation; and
   - Extension to the Necton National Grid substation and overhead line modifications.

1.2 Purpose of this document

5. This document lists all the mitigation proposed in the Environmental Impact Assessment (EIA) for Norfolk Vanguard. The following schedule lists all measures proposed on a topic by topic basis and signposts where the commitment made in the

Environmental Statement are secured in the draft Development Consent Order (DCO) and associated documents.

2 SCHEDULE OF MITIGATION

2.1 Offshore Schedule

Table 2.1 Offshore mitigation measures

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 8 Marine Geology, Oceanography and Physical Processes					
Construction					
1	Section 8.7.4	Marine physical processes	Minimum distance of 680m between adjacent wind turbines	Minimise impact on marine physical process interactions	DCO Schedule 1, Part 3, Requirement [2(d)] and Condition [1(d)] of the DMLs (DCO Schedules 9, 10, 11 and 12)
2	Section 8.7.4	Seabed disturbance	Pile-driving techniques are to be used in preference of drilling where practicable to do so	Minimise quantity of sub-surface sediment released into water column	DCO Schedules 9 and 10 Condition [14(1)(c)(i)] and Schedule 11 and 12 Condition [9(1)(c)(i)] - Construction Method Statement, including foundation installation methodology
3	Section 8.7.4	Seabed disturbance	Micro-siting to be used where necessary	Minimise the requirements for seabed preparation	DCO Schedule 9 and 10 Condition [14(1)(a)(xi)] and Schedule 11 and 12 Condition [9(1)(a)(vii)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
4	Section 8.7.4	Sediment transport	Cables to be buried where possible	Reduce risk of cable exposure due to seabed level changes and need for cable protection, as such minimising impacts on sediment transport	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable Specification, Installation and Monitoring Plan
5	Section 8.7.4	Coastal erosion	Long Horizontal Directional Drilling (HDD) to be used at landfall, with cables to be buried at sufficient depth below the coastal shore platform and cliff base	Avoid interference with natural coastal erosion	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable Specification, Installation and Monitoring Plan
6	Section 8.7.4	Ecological	Offshore cable corridor to be routed to the south of the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ)	Avoid potential impacts on the MCZ	Limits of the Agreement for Lease boundary
7	Section 8.7.4	Coastal processes	Seabed material temporarily removed from the Haisborough, Hammond and Winterton Special Area of Conservation (SAC) will be deposited back into the SAC using an approach, to be agreed with Natural England and the Marine Management Organisation (MMO), which would ensure that the sediment is available to replenish the sandbank features	Reduce impacts to sediment cell processes	DCO Schedule 9 and 10 Condition [14(1)(c)(iii)] and Schedule 11 and 12 Condition [9(1)(c)(iii)] - Construction Method Statement for Cable Installation

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Operation and Maintenance					
8	Section 8.7.8	Changes to the wave or tidal regime due to the presence of wind turbine structures	None proposed – impacts of negligible significance	n/a	n/a
9	Section 8.7.8	Changes to the sediment transport regime due to the presence of wind turbine foundation structures	None proposed – impacts of negligible significance	n/a	n/a
10	Section 8.7.8	Loss of seabed morphology due to the footprint of wind turbine foundation structures	None proposed – impacts of negligible significance	n/a	n/a
11	Section 8.7.8	Morphological and sediment transport effects due to cable protection measures for cables	None proposed – impacts of negligible significance	n/a	n/a
12	Section 8.7.8	Cable repairs/reburial and maintenance vessel footprints	None proposed – impacts of negligible significance	n/a	n/a
Decommissioning					
13	Section 8.7.9	As construction impacts or less	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance	Decommissioning impacts to be managed based on latest	DCO Schedule 1, Part 3, Requirement [14] -

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Programme.	information	Decommissioning Programme
Chapter 9 Marine Water and Sediment Quality					
Construction					
14	Section 9.7.4	Deterioration in water quality	A Project Environmental Management Plan (PEMP) will be produced for the construction of the project, an outline version of which is submitted as part of this DCO application (document 8.14)	Minimising impacts of spills and discharges	DCO Schedule 9 and 10 Condition [14(1)(d)] and Schedule 11 and 12 Condition [9(1)(d)] - PEMP
Operations and Maintenance					
15	Section 9.7.5	No operational effects anticipated on marine sediment and water quality as embedded mitigation will remove the risk of any effects occurring	Embedded mitigation – refer to Chapter 9 Section 9.7.1	Avoid impacts resulting from the release of pollutants and contamination	DCO Schedule 9 and 10 Condition [14(1)(d)] and Schedule 11 and 12 Condition [9(1)(d)] - PEMP

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Decommissioning					
16	Section 9.7.6	As construction impacts or less	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Programme.	Decommissioning impacts to be managed based on latest information	DCO Schedule 1, Part 3, Requirement [14] - Decommissioning Programme
Chapter 10 Benthic and Intertidal Ecology					
Construction					
17	Section 10.7.1	Ecological conservation designations	Extensive site selection and route refinement process of the offshore wind farm sites and cable corridor (Chapter 4 Site Selection and Assessment of Alternatives section 4.7)	Avoidance of marine designations of ecological conservation where practicable	Limits of the Agreement for Lease boundary
18	Section 10.7.1	Intertidal ecology and amenity disturbance	Long Horizontal Directional Drilling (HDD) will be used at the landfall between an onshore location to the subtidal zone (at least -5.5m LAT)	Reduction of impact to intertidal ecology and coastal amenity	DCO Schedule 1, Part 3, Requirement [16(17)], Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
					Specification, Installation and Monitoring Plan
19	Section 10.7.1	Seabed disturbance	Reduction in the maximum number of turbines from 257 to 200	Minimise potential impacts to protected species and habitats	DCO Schedule 1, Part 3, Requirement [2(b)] and DMLs (DCO Schedules 9 to 12) Condition [8(1)(b)]
20	Section 10.7.1	Seabed disturbance	Use of High-voltage Direct Current (HVDC) solution in order to reduce the number of export cables and volume of cable protection. Results in: • Two cable trenches instead of six; • The volume and area of sediment arising from pre-sweeping and cable installation works is reduced; • The volume of cable protection is reduced.	Reduction in volume of sediment and area of disturbance	DCO Schedule 1, Part 3, Requirement 5 and DMLs (DCO Schedules 9 to 12) Condition [2]
21	Section 10.7.1	Protected habitats/species	Pre-construction surveys undertaken within 12 months of installation for Habitats of Principle Importance (HPI) and Annex I reef habitats. Micrositing undertaken where possible if such habitats are identified within the location of construction works	Minimise potential impacts to protected species and habitats	DCO Schedule 9 and 10 Condition [14(1)(b)(iii)] and Condition [14(1)(a)(xi)] and Schedule 11 and 12 Condition [9(1)(b)(iii)] and Condition [9(1)(a)(xi)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
22	Section 10.7.1	Temporary disturbance	Micrositing to be used where necessary and practicable	Avoid Annex 1 Reef where practicable	DCO Schedule 9 and 10 Condition [14(1)(a)(xi)] and Schedule 11 and 12 Condition [9(1)(a)(xi)]
23	Section 10.7.1	Minimising cable protection	Cables will be buried where possible	Minimise potential impacts to protected species and habitats	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable Specification, Installation and Monitoring Plan
24	Section 10.7.1	Seabed disturbance	Seabed material temporarily removed from the Haisborough, Hammond and Winterton SAC will be deposited back into the SAC using an approach, to be agreed with the MMO, which would ensure that the sediment is available to replenish the sandbank features	Reduce impacts of disturbance	DCO Schedule 9 and 10 Condition [14(1)(c)(iii)] and Schedule 11 and 12 Condition [9(1)(c)(iii)] - Construction Method Statement for Cable Installation Disposal site licencing based on the Site Characterisation Report (document 8.15)
25	Section 10.7.1	Seabed disturbance	Sediment would not be disposed of within 50m of known core *Sabellaria* reef	Minimise potential impacts to protected species and habitats	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable Specification, Installation and Monitoring Plan

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
26	Section 10.7.1	Non-native invasive species	Use of best practice measures including appropriate vessel maintenance following International Convention for the Prevention of Pollution from Ships (MARPOL) guidance.	Reduce the risk (and impact) of spreading non-native invasive species	DML Schedule 12 and 14 Condition [14(1)(d)] – PEMP
Operations and Maintenance					
27	Section 10.7.5.	Permanent and Temporary disturbance/loss of habitat	As mitigation described for construction	The avoidance of disturbance to habitats during the construction phase also serves to minimise impacts over the project life	As construction
28	Section 10.7.5.	Electromagnetic field (EMF)	Burial of cables where possible	Reduced impact on marine fauna and flora from EMF	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable Specification, Installation and Monitoring Plan
Decommissioning					
29	Section 10.7.6.	As construction or less	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and	Decommissioning impacts to be managed based on latest information	DCO Schedule 1, Part 3, Requirement [14] - Decommissioning Programme

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			consenting approach, and would be undertaken in accordance with an approved Decommissioning Programme.		
Chapter 11 Fish and Shellfish Ecology					
Construction					
30	Section 11.7.1	Impacts on Fish Ecology	Site selection of OWF sites and offshore cable corridor has been carefully undertaken to avoid designated sites where practicable	Avoidance of marine designations of ecological conservation where practicable	Limits of the Agreement for Lease boundary
31	Section 11.7.1	Impacts on Fish Ecology	Reduction in maximum number of turbines from 257 to 200	Minimise impact to seabed and fish and shellfish receptors	DCO Schedule 1, Part 3, Requirement [2(b)] and DMLs (DCO Schedules 9 to 12) Condition [8(1)(b)]
32	Section 11.7.1	Impacts on Fish Ecology	Use of High-voltage Direct Current (HVDC) solution in order to reduce the number of export cables and volume of cable protection. Results in: • Two cable trenches instead of six; • The volume and area of sediment arising from pre-sweeping and cable installation works is reduced; • The volume of cable protection is reduced.	Reduction in volume of sediment and area of disturbance Minimises impacts to fish and shellfish receptors	DCO Schedule 1, Part 3, Requirement 5 and DMLs (DCO Schedules 9 to 12) Condition [2]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
33	Section 11.7.1	Construction period	Overnight 24 hour construction working practices will be employed where possible	Reduces overall length of time of potential impacts to fish and shellfish receptors	DCO Schedule 9 and 10 Condition [14(1)(d)] and Schedule 11 and 12 Condition [9(1)(d)] - PEMP
34	Section 11.7.1	Construction noise	Soft-start pile driving techniques will be implemented. Each piling event would commence with soft start and ramp up over 30 minutes.	Minimises impact to mobile fish and shellfish receptors able to vacate the vicinity	DCO Schedule 9 and 10 Condition [14(1)(c)(ii)] and Schedule 11 and 12 Condition [9(1)(c)(ii)] - Construction Method Statement on soft start procedures
Operations and Maintenance					
35	Section 11.7.5	EMF Impacts on Fish Ecology	Offshore export cables will be buried to a depth of 1m below the seabed where possible	Reduces requirement for cable protection and impacts to fish and shellfish receptors from EMF	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable Specification, Installation and Monitoring Plan
Decommissioning					
36	Section 11.7.6	As construction or less	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and	Decommissioning impacts to be managed based on latest information	DCO Schedule 1, Part 3, Requirement [14] - Decommissioning Programme

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			consenting approach, and would be undertaken in accordance with an approved Decommissioning Programme.		
Chapter 12 Marine Mammals					
Construction					
37	Section 12.7.1	Underwater noise impacts to marine mammals	Reduction in maximum number of turbines from 257 to 200	Reduce impact of noise on marine mammals	DCO Schedule 1, Part 3, Requirement [2(b)] and DMLs (DCO Schedules 9 to 12) Condition [8(1)(b)]
38	Section 12.7.1	Underwater noise impacts to marine mammals	Soft-start pile driving techniques will be implemented. Each piling event would commence with soft start and ramp up over 30 minutes.	Reduce impact of noise on marine mammals	DCO Schedule 9 and 10 Condition [14(1)(f)] Schedule 11 and 12 Condition [9(1)(f)] -Marine Mammal Mitigation Protocol
39	Section 12.7.1	Underwater noise impacts to marine mammals	A mitigation zone would be identified based on instantaneous Permanent Threshold Shift (PTS) impact ranges. Measures will aim to remove marine mammals from the mitigation zone prior to the start of piling.	Reduce impacts of noise on marine mammals, and risk of any physical or auditory injury	DCO Schedule 9 and 10 Condition [14(1)(f)] Schedule 11 and 12 Condition [9(1)(f)] - Marine Mammal Mitigation Protocol
40	Section 12.7.1	Underwater noise impacts to marine mammals	Measures to reduce potential disturbance on the Southern North Sea Candidate Special Conservation	Reduce impacts of noise on marine mammals, and risk of any physical or auditory	DCO Schedule 9 and 10 Condition [14(1)(m)] and Schedule 11 and 12

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			Area (cSAC).	injury	Condition [9(1)(l)] - Site Integrity Plan
41	Section 12.7.1	Impacts on marine environment through impacts to water quality	A PEMP will be produced for the construction of the project which will include management of potential pollution.	Minimise the risk and impact of accidental spillages and discharges of chemicals	DCO Schedule 9 and 10 Condition [14(1)(d)] and Schedule 11 and 12 Condition [9(1)(d)] - PEMP
Operations and Maintenance					
42	Section 12.7.5.	Underwater noise during operation and maintenance	None proposed – impacts of minor negligible significance	n/a	n/a
43	Section 12.7.5	Vessel collision risk	None proposed – impacts of minor negligible significance	n/a	n/a
44	Section 12.7.5	Disturbance at seal haul out sites	None proposed – impacts of minor negligible significance	n/a	n/a
45	Section 12.7.5	Entanglement in floating foundations	None proposed – impacts of minor negligible significance	n/a	n/a
46	Section 12.7.5	Changes to prey resource	None proposed – impacts of minor negligible significance	n/a	n/a
Decommissioning					
47	Section 12.7.6.	As construction impacts or less	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject	Decommissioning impacts to be managed based on latest information	DCO Schedule 1, Part 3, Requirement [14] - Decommissioning Programme

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Programme.		
Chapter 13 Offshore Ornithology					
Construction					
48	Section 13.7.1	Physical disturbance	Extensive site selection and route refinement process identified through the Zonal Appraisal and Planning process	Avoidance of European protected sites and sensitive ecological receptors	Limits of the Agreement for Lease boundary
Operations and Maintenance					
49	Section 13.7.1	Collision risk	Reduction in maximum number of turbines from 257 to 200	Reduction of risk of collision.	DCO Schedule 1, Part 3, Requirement [2(b)] and DMLs (DCO Schedules 9 to 12) Condition [8(1)(b)]
50	Section 13.7.1	Physical disturbance	Extensive site selection and route refinement process identified through the Zonal Appraisal and Planning process	Avoidance of European protected sites and sensitive ecological receptors	Limits of the Agreement for Lease boundary
Decommissioning					
51	Section 13.7.6	As construction or less	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy	Decommissioning impacts to be managed based on latest information	DCO Schedule 1, Part 3, Requirement [14] - Decommissioning Programme

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Programme.		
Chapter 14 Commercial Fisheries					
Construction, Operation and Maintenance and Decommissioning					
52	Section 14.7.1	Fishing community	Reduction in maximum number of turbines from 257 to 200	Minimise impact on fishing community	DCO Schedule 1, Part 3, Requirement [2(b)] and DMLs (DCO Schedule 9 to 12) Condition [8(1)(b)]
53	Section 14.7.1	Navigation and transit	Minimum separation distance of 680m between wind turbines, to be arranged in a regular pattern	Reduces impact on navigation through the OWF sites	DCO Schedule 1, Part 3, Requirement [2(d)] and Condition [1(d)] of the DMLs (DCO Schedules 9, 10, 11 and 12)
54	Section 14.7.1	Fishing community	Use of High-voltage Direct Current (HVDC) solution in order to reduce the number of export cables and volume of cable protection. Results in: • Two cable trenches instead of six; • The volume and area of	Reduce extent of impacts on fishing community	DCO Schedule 1, Part 3, Requirement 5 and DMLs (DCO Schedules 9 to 12) Condition [2]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			sediment arising from pre-sweeping and cable installation works is reduced; • The volume of cable protection is reduced.		
55	Section 14.7.1	Fishing community	Timely and efficient Notice to Mariners, Kingfisher notifications and other navigational warnings issued to fishing community	Minimise impact on fishing community	DCO Schedule 9 and 10 Condition [9] and Schedule 11 and 12 Condition [7]
56	Section 14.7.1	Fishing community	Appropriate liaison will be undertaken with all relevant fishing interests to ensure that they are fully informed of development planning, construction and maintenance	Reduce conflicts and minimise impact on fishing community	DCO Schedule 9 and 10 Condition [14(d)(v)] and Schedule 10 and 11 Condition [9(d)(v)] - Fisheries Liaison and Coexistence Plan
57	Section 14.7.1	Fishing community	A Fisheries Liaison Officer (FLO) will be appointed during construction and operational phases of the project and FLOWW Guidance (2014; 2015) adhered to	Minimise impacts on the fishing community	DCO Schedule 9 and 10 Condition [14(d)(iv)] and Schedule 11 and 12 Condition [9(d)(iv)]
58	Section 14.7.1	Impact on fishing community	Regular updates to the UK Hydrographic Office (UKHO) on both progress and completion of Norfolk Vanguard	Avoid miscommunication between regulators and fishing community	DCO Schedule 9 and 10 Condition [9 and 16] and Schedule 11 and 12 Condition [4 and 11]
59	Section 14.7.1	Fishing equipment	Array, interconnector and export cables to be buried where possible	Minimises damage to and from fishing gear	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
					Condition [9(1)(g)] - Cable Specification, Installation and Monitoring Plan
60	Section 14.7.1	Fishing equipment	Information on the location of areas of cable protection are to be communicated to the fishing industry	Reduced impact to fishing equipment	DCO Schedule 9 and 10 Condition [14(d)(v)] and Schedule 10 and 11 Condition [9(d)(v)] - Fisheries Liaison and Coexistence Plan
61	Section 14.7.1	Fishing community	All contractors undertaking site works would be contractually obliged, and monitored by client representatives, to ensure compliance with offshore policies. These policies would prohibit the discarding of objects or materials overboard and require rapid recovery of any accidentally dropped objects.	Minimises impact on fishing community	DCO Schedule 9 and 10 Condition [14(1)(d)] and Schedule 11 and 12 Condition [9(1)(d)] - PEMP as well as Schedule 9 and 10 Condition [12(10)] and Schedule 11 and 12 Condition [7(11)]
62	Section 14.7.1	Fishing equipment	Post-construction surveys will be undertaken to identify any construction related seabed obstacles. Any detected will be removed	Minimise impact on fishing gear	DCO Schedule 9 and 10 Condition [14(b)(iii)]and Schedule 11 and 12 Condition [9(b)(iii)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 15 Shipping and Navigation					
Construction, Operation & Maintenance, Decommissioning					
63	Section 15.7.1	Impacts	An Emergency Response and Cooperation Plan (ERCOP) will be produced post consent in accordance with Maritime Coastguard Agency (MCA) guidance.	Reduce the effect of diminishing emergency response resources.	DML Schedule 12 and 14 Condition [15(5)]
64	Section 15.7.1	Impacts to safety of shipping industry	Safety zones will also be implemented during construction of up to 500m around structures under construction.	Reduce safety impacts to shipping industry	DCO Schedule 9 and 10 Condition [14(1)(c)]and Schedule 11 and 12 Condition [9(1)(c)] - Construction Method Statement for Vessels Transit Corridors
65	Section 15.7.1	Impacts to safety of shipping industry	During pre-commissioning, a safety zone of up to 50m around wind turbines where construction has finished but some work is on-going (e.g. WTG incomplete or in the process of being commissioned)	Minimise safety impacts to shipping industry	DCO Schedule 9 and 10 Condition [14(1)(c)]and Schedule 11 and 12 Condition [9(1)(c)] Construction Method Statement for Vessels Transit Corridors
66	Section 15.7.1	Impact on shipping routes and navigation	Cable Burial Risk Assessment undertaken pre-construction, including consideration of under keel clearance. All subsea cables will be suitably protected based on the risk	Reduce impact on shipping routes and navigation	DCO Schedule 9 and 10 Condition [14(1)(g)] and Schedule 11 and 12 Condition [9(1)(g)] - Cable Specification, Installation

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			assessment, and the protection will be monitored and maintained as practicable		and Monitoring Plan
67	Section 15.7.1	Impact on shipping from collisions	Compliance from all vessels associated with the proposed project with international maritime regulations as adopted by the relevant flag state (e.g. International Convention for the Prevention of Collision at Sea (COLREGS) (IMO, 1972) and International Convention for the Safety of Life at Sea (SOLAS (IMO, 1974)	Reduce impact to marine mammals and shipping	DCO Schedule 9 and 10 Condition [14(1)(c)]and Schedule 11 and 12 Condition [9(1)(c)] - Construction Method Statement for Vessels Transit Corridors
68	Section 15.7.1	Impact to shipping routes and navigation	Final site design to include consideration of lighting and marking. Site design to ensure no outlying or extreme peripheral turbines and regular edges either side of the DWR. Discussions with neighbouring projects to understand relationship with Norfolk Vanguard also required	Minimise impacts to shipping routes and navigation	DCO Schedule 9 and 10 Condition [14(1)(a)] Schedule 11 and 12 Condition [9(1)(a)] -Design Plan and DCO Schedule 9 and 10 Condition [10(1)] and Schedule 11 and 12 Condition [5]
69	Section 15.7.1	Impact on under keel clearance and shipping industry	Minimum keel clearance of 4m to be maintained around turbines to ensure they do not impact on vessels transiting within the array.	Reduce impacts on shipping	DCO Schedule 9 and 10 Condition [4(2)(d)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
70	Section 15.7.1	Impact on shipping	Floating foundation mooring lines will be independently verified by a third party and meet required ISO standards	Minimise impacts to shipping	DCO Schedule 9 and 10 Condition [14(1)(c)] - Construction Method Statement
71	Section 15.7.1	Impact on fishing and shipping community	Information relevant to the proposed project will be promulgated via Notice to Mariners and other appropriate media including provision of information for use in fish plotters (where available)	Reduce impacts to shipping community	DCO Schedule 9 and 10 Condition [9(8)] and Schedule 11 and 12 Condition [7(8)]
72	Section 15.7.1	Impact to shipping industry	Marine traffic coordination to manage Norfolk Vanguard construction and operation vessels;	Mitigate impacts to shipping industry	DCO Schedule 9 and 10 Condition [19(4)] and Schedule 11 and 12 Condition [14(4)] - Navigation Monitoring Strategy
73	Section 15.7.1	Impacts to vessel navigation	Structures and all subsea cables will be clearly marked on appropriately scaled nautical charts and electronic charts	Minimise impacts to vessel navigation	DCO Schedule 9 and 10 Condition [14(1)(k)] and Schedule 11 and 12 Condition [9(1)(k)] - Aids to Navigation Management Plan
74	Section 15.7.1	Impacts to shipping industry and navigation	Suitable lighting and marking of the OWF sites complying with International Association of Lighthouse Authorities (IALA)	Reduce collision impacts to the shipping industry and navigation	DCO Schedule 9 and 10 Condition [14(1)(k)] and Schedule 11 and 12 Condition [9(1)(k)] - Aids

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			Recommendations O-139 (IALA, 2013), to be finalised in consultation with TH and the MCA. Fog horns will alert vessels to the position of structures when visibility is poor		to Navigation Management Plan
75	Section 15.7.1	Impacts on safety of shipping industry	Use of guard vessel during the deployment of safety zones, and during any other key construction periods	Reduce safety impacts to shipping industry	DCO Schedule 9 and 10 Condition [14(1)(k)] and Schedule 11 and 12 Condition [9(1)(k)] - Aids to Navigation Management Plan
76	Section 15.7.1	Impacts to shipping and navigation	Wind turbines will have at least 22m clearance above Mean Highwater Springs (MHWS)	Minimise impacts to shipping and navigation	DCO Schedule 9 and 10 Condition [2(1)(e)] and Schedule 11 and 12 Condition [1(1)(e)]
77	Section 15.7.1	Impacts to shipping navigation	Third party vessels will adhere to rules and regulations set out in MGN 372 (MCA, 2008), COLREGs (IMO, 1972) and SOLAS (IMO, 1974)	Reduce impacts to shipping navigation	DCO Schedule 9 and 10 Condition [14(1)(c)]and Schedule 11 and 12 Condition [9(1)(c)] Construction Method Statement
78	Section 15.7.1	Impacts to shipping	The proposed project will be constructed in accordance with MGN 543 where applicable (MCA, 2016)	Minimise impacts to shipping	DCO Schedule 9 and 10 Condition [14(1)(a)(ix)], [15(5)], Schedule 11 and 12 Condition [10(6)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 16 Aviation and Radar					
Construction, Operation and Maintenance, and Decommissioning					
79	Section 16.7.1	Physical impacts to aviation	Notify aviation stakeholders of the location and dimension of any project infrastructure and all associated construction activities. Information will be passed to the Defence Geographic Centre (DGC) and the General Aviation Awareness Council (GAAC) at least 10 weeks in advance of the first WTG being constructed. During the erection of each WTG a follow up to these organisations shall be made with information in relation to: • Location, height (of all structures over 45.7m); and • Local aerodromes identified during consultation should be notified, particularly any police helicopter or air ambulance unit.	Minimise impacts to aviation industry	DCO Schedule 1, Part 3, Requirement [12(2)]
80	Section 16.7.2	Impacts to aviation industry	Information to be circulated to the Defence Infrastructure Organisation (DIO). Information on potential aviation obstructions will be promulgated within the UK IAIP (NATS, 2017) and notified to DGC for	Communication of potential impacts to aviation industry	DCO Schedule 1, Part 3, Requirement [12(2)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			marking on aeronautical related charts and documentation		
81	Section 16.7.2	Light impacts to aviation industry	CAP 393 Article 223 (CAA, 2016b) sets out the mandatory requirements for lighting of offshore WTGs.	Reduce impacts from illumination to aviation industry	DCO Schedule 1, Part 3, Requirement [12(1)]
82	Section 16.7.2	Impacts to helicopter hoisting operations and safety	CAP 437 (CAA 2016c) sets out a procedure to indicate to a helicopter operator that the WTG blades and nacelle are safely secured in position prior to helicopter hoist operations commencing.	Mitigate the impacts to helicopter hoisting and safety	DCO Schedule 1, Part 3, Requirement [12(1)]
83	Section 16.7.2	Impacts on aviation	An ERCoP will be in place for the construction, operation and decommissioning phases of Norfolk Vanguard	Decrease impacts to aviation	DML Schedule 12 and 14 Condition [15(5)]
84	Section 16.7.2	Impacts of on Search and Rescue	The Search and Rescue (SAR) helicopter bases will be supplied with an accurate chart of Norfolk Vanguard WTG Global Positioning System (GPS) locations and will provide agreed SAR access lanes, helicopter access positions and spacing between WTGs. Furthermore, the arrangements of liaison between the wind farm developer and HM Coastguard in the	Reduce impacts of turbines to aviation, and establish effective communication streams in the event of an emergency	DCO Schedule 9 and 10 Condition [15(5)] Schedule 11 and 12 Condition [10(5)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			event of an emergency response will be detailed together with an explanation of procedures and processes carried out at the Norfolk Vanguard control centre to shut down the WTGs and the procedures for the CGOC to request a WTG shut down.		
85	Section 16.7.5.1	Impacts to aviation safety	Appropriate liaison will be undertaken to ensure information on the construction and decommissioning of the wind farm is circulated in a Notice to Airmen (NOTAM) and other appropriate media	Reduce impacts to aviation industry	DCO Schedule 1 Part 3 Requirement [12] and DCO Schedule 1, Part 3, Requirement [14] - Decommissioning Programme
86	Section 16.7.5.1	Impacts to helicopter/aviation industry	The Civil Aviation Authority (CAA) will be consulted with regard to co-locating Helicopter Main Routes (HMRs) with any proposed lanes within the OFW site areas. The co-location of lanes/routes will: • Allow helicopters to continue to operate using the established altitude banding system whilst operating on a HMR route systems; • Minimise any effect on helicopter operations when	Decrease impacts to helicopters/aviation industry	DCO Schedule 1, Part 3, Requirement [12]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			poor weather or icy conditions are encountered as lanes/routes would be clear of fixed obstacles; • Provide a route which was clear of fixed obstacles in the case of helicopter emergency situations.		
Chapter 17 Offshore and Intertidal Archaeology and Cultural Heritage					
Construction, Operation and Maintenance, and Decommissioning					
88	Section 17.7.2	Impact to archaeological and cultural heritage assets	50m Archaeological Exclusion Zones around the extents of known wreck sites (A1s) and 50m around the point locations of A1 magnetic only anomalies within which no development related activities will take place	Reduce impact to archaeological and cultural heritage assets	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] – Archaeological Written Scheme of Investigation (WSI) (offshore)
89	Section 17.7.2	Impact to potential archaeological and heritage assets	Avoidance where possible of identified anomalies (A2s) or previously recorded sites that have not been seen in the geophysical data (A3s) by micro-siting of design	Avoidance of identified archaeological and heritage anomalies	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
90	Section 17.7.2	Impact to archaeological and cultural heritage assets	Further investigation of any identified anomalies (A2s) or previously recorded sites that have not been seen in the geophysical	Minimise impacts to archaeological and cultural heritage assets	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] -

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			data (A3) that cannot be avoided by micro-siting of design		Archaeological WSI (offshore)
91	Section 17.7.2	Impact to geomorphology of historic and cultural interest	Further examination of potential pre-historic deposits including geoarchaeological recording of core samples, deposit modelling and archaeological input into any future sampling programme	Lessening impacts to archaeological geomorphological features	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
92	Section 17.7.2	Impacts to archaeological and cultural heritage assets	In the event of impact to potential sites, the establishment of a formal protocol to ensure that any finds are promptly reported, archaeological advice is obtained, and any recovered material is stabilised, recorded and conserved	Minimise impacts to archaeological and cultural heritage assets	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
93	Section 17.7.2	Potential for impacts to buried assets	Watching briefs where seabed material is brought to the surface, for example during pre-lay grapnel runs, and for any intrusive works carried out in the landfall zone (during long HDD)	Reduce impacts to buried assets once discovered	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
94	Section 17.7.2	Potential for impacts to the geophysical landscape	The archaeological assessment of any further geophysical data	Reduce impacts to geophysical landscape	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
95	Section 17.7.2	Impacts on unavoidable archaeological and cultural heritage assets	Where such features cannot be avoided, the anomalies must be investigated for the nature and extent to establish the archaeological interest and to record them prior to removal.	Decrease impacts to unavoidable archaeological and cultural heritage features	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
96	Section 17.7.2	Impacts to geophysical and geotechnical features	Consultation with Historic England regarding the scope of all further post-consent geophysical and geotechnical surveys to be undertaken for the project in order to ensure that the data generated are sufficiently robust to enable professional archaeological interpretation and analysis	Minimise impacts to geophysical and geotechnical features	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
97	Section 17.7.2	Impacts to objects of archaeological interest	Follow guidance set out in the *Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate, 2014)* (ORPAD) in the event that unexpected archaeological material(s) is discovered during construction, operation and decommissioning	Lessen impacts to unexpected archaeological finds	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
98	Section 17.7.2	Impacts to archaeology	A draft WSI setting out the methodology for all proposed embedded mitigation will be	Mitigate impacts to archaeology	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			prepared in consultation with Historic England for submission alongside the DCO application for the project. The WSI will take account of the standards and guidance presented in *Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects* (The Crown Estate, 2010)		Condition [9(1)(h)] - Archaeological WSI (offshore)
99	Section 17.7.4	Impacts to individual discoveries of archaeological or heritage importance	Individual discoveries would be considered independently and any requirements for further data gathering or analysis would be considered on a case by case basis according to the heritage significance of the discovery	Minimise impacts to individual archaeological/heritage discoveries	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
100	Section 17.7.5.1	Impacts to UXO and other heritage assets	Pre-construction survey data collected, including high resolution geophysics undertaken for the purposes of UXO identification, will be assessed to further clarify the nature and extent of anomalies and the scheme designed modified to avoid heritage assets wherever possible	Minimise impacts heritage assets including UXO	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
101	Section 17.7.5.2	Impacts to identified pre-historic sites	Should *in situ* prehistoric sites be identified as a result of assessing pre-construction geotechnical and geophysical data, then mitigation measures to record and/or protect such sites would be agreed in consultation with Historic England	Decrease impacts to prehistoric sites	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
102	Section 17.7.5.2	Impacts to in situ prehistoric sites	Undertake a programme of geoarchaeological assessment to ascertain the nature and archaeological potential of sub-seabed deposits within study area	Minimise impact to potential in situ prehistoric sites	DCO Schedules 9 and 10 Condition [14(1)(h)] and Schedules 11 and 12 Condition [9(1)(h)] - Archaeological WSI (offshore)
103	Section 17.7.5.1	Impacts to known archaeology	Within the intertidal zone, the use of HDD construction methods will be utilised	Reduce impacts to known archaeology remains	DCO Schedule 1, Part 3, Requirement [17] - Landfall Method Statement
Chapter 18 Infrastructure and Other Users					
Construction, Operation and Maintenance, and Decommissioning					
104	Section 18.7.1	Impacts to infrastructure assets and users	Extensive site selection and route refinement	Avoidance of existing infrastructure such as oil and gas wells, licensed dredging and extraction areas, MOD danger areas, Practice and Exercise Areas (PEXA), pipelines,	Limits of the Agreement for Lease boundary

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
				telecommunication and transmission cables where possible	
105	Section 18.7.1	Impacts to infrastructure and the owners, and impacts to infrastructure users	Consultation with owners and operators of existing infrastructure or licence holders	Minimise impacts to infrastructure, the owners and users	Project design - embedded mitigation
106	Section 18.7.3.1	Impacts to infrastructure and users	Proactive cable and pipeline crossing agreements with operators will be agreed prior to construction	Reduce the risk of impact to existing infrastructure	Schedule 9 Protective Provisions

2.2 Onshore Schedule

Table 2.2 Onshore mitigation measures

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 19 Ground Conditions and Contamination					
Construction					
1	Section 19.7.5.2.1	Pollution impacts to ground conditions	A Code of Construction Practise (CoCP) will be produced and followed for the Environment Agency's Pollution Prevention Guidance (PPG1, PPG5, PPG21 and PPG22). An Outline CoCP (OCoCP) has been produced, containing management measures for site security, personal hygiene, use of Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE), dust suppression methods and measures to avoid surface water ponding.	Reduce risk and impact of pollution to land.	DCO Schedule 1, Part 3, Requirement [20] - CoCP
2	Section 19.7.3.6	Impacts to HSE	A CoCP would be prepared and implemented during construction to minimise the exposure of workers and the general public to potentially harmful substances. This will include details of: • Site security and preventing public access; • Personal hygiene, and washing and changing procedures;	Minimise the impact to HSE	DCO Schedule 1, Part 3, Requirement [20] - CoCP

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			• Use of PPE and where necessary, RPE; • Adoption of dust suppression methods, wheel washing facilities for vehicles leaving site, covering of stockpiled materials and materials being transported to and from site; and • Measures to avoid surface water ponding.		
3	Section 19.7.5.6.1	Contamination impacts to ground	A Site and Excavated Waste Management Plan (SWMP) will be prepared, which would ensure that waste arising is closely monitored and that waste prevention, re-use or recycling opportunities are maximised. The appropriate waste management route will be confirmed following a waste hierarchy assessment	Reduce risk of contamination from construction waste through the waste management process	DCO Schedule 1, Part 3, Requirement [20(2)(h)] CoCP - Site and excavated waste management
4	Section 19.7.5.6.1	Ground contamination impacts	A written scheme (based on the Model procedures for the management of land contamination, CLR11) for the management of contamination of any land and groundwater will be submitted and approved by the Local Planning Authority (LPA)	Ameliorate ground contamination impacts arising from construction activities	DCO Schedule 1, Part 3, Requirement [20(2)(d)] CoCP - Contaminated land and groundwater

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
5	Section 19.7.5.4.1	Groundwater quality impacts	Cable excavations will be designed to minimise groundwater disturbance. If works are required in Source Protection Zone (SPZ)1 or 2 areas, the best available techniques (BAT) will be used, in accordance with the Energy Network Engineering Recommendations (EREC). Ground investigations and a hydrogeological risk assessment will be undertaken at each trenchless crossing (e.g. Horizontal Directional Drilling (HDD)) site. Alternative techniques will be considered if required. Where works are proposed within any SPZ1 or 2 areas, a more detailed hydrogeological risk assessment meeting the requirements of Groundwater Protection Principles and Practice (GP3) (Environment Agency, 2017), and in agreement with the Environment Agency and Anglian Water, will be undertaken for each trenchless crossing location. Alternative techniques would also be considered if required. These would be confirmed for each location, and could potentially include over ground	Minimise disturbance to groundwater	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			crossings or trenchless alternatives to HDD.		
6	Section 19.7.5.1.1	Impact to sea defences which protect soil/ground from erosive processes	Trenchless crossing techniques will be used for cable installations at the landfall	Reduce impact on sea defences which would open up impacts on ground conditions	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
7	Section 19.7.5.7.2	Contamination and waste impacts to ground	The agreed construction approach will be set out in a Materials Management Plan (MMP) to be followed during construction, which will consider excavated waste management procedures	Minimise impacts from construction and waste arisings	DCO Schedule 1, Part 3, Requirement [20(2)(j)] CoCP – Materials Management Plan (MMP)
Operations and Maintenance					
n/a	n/a	n/a	n/a	n/a	n/a
Decommissioning					
8	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 20 Water Resources and Flood Risk					
Construction					
9	Section 20.7.1	Impacts to drainage	Good topsoil management practices will be followed. For the duct installation works, topsoil will be stripped, stored and capped to minimise water erosion within the easement whilst works are conducted. Long-term storage of topsoil in bunds or heaps will be avoided where possible. However, some topsoil will have to be reserved for re-covering this final area when the running track is finally removed at the end of the duct installation phase.	Reduce impacts to drainage, surface water run-off and sediment loading	DCO Schedule 1, Part 3, Requirement [20(2)(f)] CoCP – Soil management
10	Section 20.7.5.2 / Section 20.7.5.4 / Section 20.7.6	Impacts on drainage from construction	Minimise duration for which trenches remain open, by installing ducts in short sections and re-filling on completion of each section. A pre-construction drainage plan will be developed and implemented to minimise water within the cable trench and ensure ongoing drainage of surrounding land. Where water enters the trenches during installation, this will be pumped via settling tanks or ponds to remove	Reduce the impacts on drainage, surface water run-off and sediment loading	DCO Schedule 1, Part 3, Requirement]20(2)(i)] CoCP – Surface water and drainage

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			sediment, before being discharged into local ditches or drains via temporary interceptor drains.		
11	Section 20.7.1	Impacts on water resources from trenched water crossings	Where trenching is required, the channel will be reinstated to at least the previous standard (if not an improved standard), and the dams removed. Cable ducts would typically be installed 1.5m below the bed of the watercourse, although this would be dependent upon local geology and associated risks	Avoids direct impacts on the water bodies and channels	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage
12	Section 20.7.1	Impacts to geomorphology and hydrology from water course crossings	Trenchless crossing techniques (e.g. HDD) will be employed at the River Wensum, River Bure, King's Beck, Wendling Beck (downstream), and North Walsham and Dilham Canal. Typically, for a river crossing, HDD ducts would typically be installed at least 2m below the bed of the watercourse, although this would be dependent upon local geology and associated risks	Avoids direct impacts on the water bodies and channels	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
13	Section 20.7.1	Impact to surface waters and drainage from site access	Use of existing tracks and roadways for access where possible. Where temporary accesses are needed, topsoil and surface water management measures as above will	Reduce the impacts on drainage, surface water run-off and sediment loading	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			be used		drainage
14	Section 20.7.1	Impacts to geomorphological hydrological process from cable ducting	Cable ducting will typically be installed at least 1.5m beneath the bed of the watercourse for trenched crossings, although dependent upon geology and other associated risks, to prevent geomorphological impacts (e.g. bed scour and channel instability) and avoid exposure during periods of higher energy flow where the bed could be mobilised	Minimise impact to geomorphology and hydrology processes	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and drainage
15	Section 20.7.1 / 20.7.5.3.1	Impacts to drainage from mobilisation areas	Mobilisation areas will comprise hardstanding of permeable gravel aggregate underlain by geotextile, or other suitable material, to prevent soil erosion and increased surface runoff	Reduce impacts to surface drainage regimes	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and drainage
16	Section 20.7.5.3	Pollution or contamination of surface water drainage systems	Surface water drainage requirements will be designed to meet the requirements of the National Planning Policy Framework (NPPF) and National Policy Statement (NPS) EN-5. The Sustainable Urban Drainage (SuDS) philosophy will be employed to limit run-off, where feasible, through the use of infiltration techniques which can be accommodated within the area of the	Decrease significance of impacts to drainage	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			project. Foul drainage will be collected through a mains connection to existing local authority sewer system if available or septic tank located within the onshore project area.		
17	Section 20.7.5.1	Pollution or contamination of water courses	Minimising the width of the working area to limit the area of direct disturbance (e.g. from 6m to 3m at watercourse crossings)	Reduces the spatial extent of disturbance to the watercourse.	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
18	Section 20.7.5.1	Pollution or contamination of water courses	Selecting the appropriate trenched crossing technique to best reflect the sensitivity of the location to ensure that impacts are minimised. Pumps or alternative conveyance mechanisms will be suitably sized to convey flows downstream and minimise upstream impoundment. Where diversion channels are used, geotextiles or similar techniques will be used to line the channel and prevent sediment entering the watercourse	Minimise sediment loading in watercourses	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
19	Section 20.7.5.1	Pollution or contamination of water courses	Reinstatement of the bed and banks to their pre-construction condition (or better, where appropriate). This will include the separate handling,	Minimise impacts on bed and banks at watercourses at trenched crossings	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			storage and reinstatement of bed substrates (e.g. gravels)		
20	Section 20.7.5.2	Pollution or contamination of water courses	The indicative area of open ground at any one time will be minimised to 0.014km^2, configured as a 45m x 300m strip. The maximum working duration within one area will be one week	Minimise sediment loading in watercourses	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and drainage
21	Section 20.7.5.2	Pollution or contamination of water courses	Subsoil exposure will be minimised and strips of undisturbed vegetation will be retained on the edge of the working area where possible	Minimise impacts and disturbance to subsoil. Minimise impacts to bed and banks of watercourses.	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and drainage
22	Section 20.7.5.2	Pollution or contamination of water courses	On-site retention of sediment will be maximised by routing all drainage through the site drainage system. The working area will be bounded by drainage channels (one on each side) to intercept drainage from within the working corridor. Additional drainage channels will be installed to intercept water from the cable trench. Depending upon the precise location, water from the channels will be infiltrated or discharged into the surface drainage network	Minimise impacts on groundwater and surface water drainage.	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and drainage

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
23	Section 20.7.5.2	Pollution or contamination of water courses	The drainage system will include silt fences at the foot of soil storage areas to intercept sediment runoff at source. Where practicable, runoff will be routed into swales, which incorporate check dams to further intercept sediment and/or attenuation ponds which incorporate sediment forebays. Suitable filters will be used to remove sediment from any water discharged into the surface drainage network	Minimise impacts on groundwater and surface water drainage.	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and drainage
24	Section 20.7.5.2	Pollution or contamination of water courses	Soil stockpiles will be covered to prevent erosion by flowing water (including rainfall and surface runoff) and wind to ensure that any remaining sediment load is attenuated	Minimise impacts to soil and reduce degradation of soil resource. Minimise sediment loading to watercourses	DCO Schedule 1, Part 3, Requirement [20(2)(f)] CoCP – Soil management
25	Section 20.7.5.2	Pollution or contamination of water courses	Additional silt fences will be included in parts of the working area that are in close proximity to surface drainage channels	Minimise sediment loading to watercourses	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
26	Section 20.7.5.2	Pollution or contamination of water courses	Soil and sediment will not be allowed to accumulate on roads. Traffic movement would be restricted to minimise the potential for surface disturbance.	Minimise sediment loading to watercourses	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
27	Section 20.7.5.2	Impacts on drainage	With regards to the onshore cable corridor, a surface water and drainage plan will be developed and implemented to minimise water within the cable trench and ensure ongoing drainage of surrounding land. Where water enters the trenches during installation, this will be pumped via settling tanks or ponds to remove sediment, before being discharged into local ditches or drains via temporary interceptor drains	Minimise risk of localised flooding and impact to drainage	DCO Schedule 1, Part 3, Requirement [20(2)(f,i)] CoCP – Soil management and surface water and drainage
28	Section 20.7.1	Surface water conveyance	Suitably sized culverts will be installed beneath the running track at watercourse crossings where appropriate to allow for the maintenance of suitable flows in drains	Reduce impact on drainage	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage
29	Section 20.7.1	Erosion of soil resource	Topsoil would be stripped from the entire width of the onshore cable route for the length of the workfront (150m), and stored and capped to minimise wind and water erosion within the onshore cable route. The profile of the soil would be carefully maintained during the storage process. The cable trenches will then be excavated, typically utilising	Minimise impact on sediment supply	DCO Schedule 1, Part 3, Requirement [20(2)(f)] CoCP – Soil management

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			tracked excavators. The excavated subsoil will be stored separately from the topsoil, capped and the profile of the soil maintained during the storage process. Appropriate storage and capping of topsoil in order to minimise wind and water erosion within the cable easement, with careful maintenance of the soil profile during the storage process. Long-term storage of topsoil in bunds or heaps will be avoided where possible. However, some topsoil will have to be reserved for re-covering this final area when the running track is finally removed at the end of the duct installation phase.		
30	Section 20.7.5.3.4	Pollution or contamination of ground water, impacts to aquifers	Cable excavations will be designed not to disturb groundwater in any significant manner. Excavations will be shallow (approximately 1.5m) and above the water table of the Principal Aquifer	Reduce contamination impacts to groundwater	DCO Schedule 1, Part 3, Requirement [20(2)(d)] CoCP - Contaminated land and groundwater
31	Section 20.7.5.3.4	Flooding	Should works be located within SPZ 1 or 2 areas, a construction working methodology will stipulate that the best available techniques are used for any installations, in accordance with	Minimise the risk of flooding	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			the Energy Network Association Guidance and the Environment Agency. A hydrogeological risk assessment meeting the requirements of the Groundwater Protection Principles and Practice (GP3) will be undertaken for any trenchless crossing locations in SPZ1 or 2 areas.		
32	Section 20.7.1	Surface water contamination	Foul drainage at the onshore project substation and mobilisation areas will be collected through a mains connection to existing local authority sewer system if available or septic tank located within the development boundary. The specific approach will be determined during detailed design with consideration for the availability of mains connection and the number of visiting hours for site attendees during operation. Foul drainage from welfare facilities along the cable route will be collected in septic tanks and taken off site for disposal.	Minimise contamination to surface waters	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage
33	Section 20.7.5.3	Pollution or contamination of ground or surface water, impacts to aquifers	Suitable biosecurity protocols (such as those outlined by the Non-Native Species Secretariat (NNSS)) would be put in place during the works in order	Minimise contamination and control spread of invasive species.	DCO Schedule 1, Part 3, Requirement [20(2)(m)] CoCP – invasive species

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			to minimise the risk of contamination and the spread of the invasive non-native species (INNS), including the spread of crayfish plague. This includes the implementation of strict biosecurity protocols such as stringent 'Check, Clean, Dry' working methodology for plant, equipment and construction crews.		
Operations and Maintenance					
34	Section 20.7.6.2.4	Groundwater contamination	Use of inert solid plastic insulation within the cables, rather than historic oil insulated cables	Reduce potential for fluid leakage from cables	DCO Schedule 1, Part 3, Requirement [20(2)(d)] CoCP - Contaminated land and groundwater
Decommissioning					
35	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 21 Land Use and Agriculture					
Construction					
36	Section 21.7.5.1.2	Range of impacts associated with construction phase	Production of a CoCP, to include: • Storage of topsoil and excavated material; and • Minimising excavation volumes and disturbances, as well as replacement of soils inadvertently disturbed.	Minimise soil degradation among other impacts of construction	DCO Schedule 1, Part 3, Requirement [20(2)(f)] CoCP – Soil management
37	Section 21.7.5.1.3	Degradation of soils	Production of a soil management plan (SMP) approved by the relevant regulator prior to construction works	Reduce soil degradation	DCO Schedule 1, Part 3, Requirement [20(2)(f)] CoCP – Soil management
38	Section 21.7.5.3.2	Degradation of soils	Implement best practice soil handling (adherence to MAFF (2000)) including: • Topsoil stripping within all construction areas and storage adjacent to where it is extracted; • Storage of the excavated subsoil separately from the topsoil, with sufficient separation to ensure segregation; • Handling of soils according to their characteristics; • Where necessary, remove tree roots by screening; • Loosening of subsoils is proposed	Reduce impacts on soil from construction activities	DCO Schedule 1, Part 3, Requirement [20(2)(f)] CoCP – Soil management

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			when dry to improve permeability before topsoil is replaced; • During wet periods, limit mechanised soil handling in areas vulnerable to compaction; • Restriction of heavy plant and vehicles to specific routes; • Minimising excavation footprint where possible; and • Further remediation for heavily compacted areas as a result of construction.		
39	Section 21.7.5.1.3	Soil degradation	Pre-construction land survey to be undertaken by a local, qualified Agricultural Liaison Officer (ALO) to record details of crop regimes, position and condition of field boundaries, existing drainage and access arrangements, and private water supplies	Ensure remediation restores the site to its original condition	DCO Schedule 1, Part 3, Requirement [20(2)(f)] CoCP – Soil management
40	Section 21.7.5.1.3	Obstruction of drainage	Running track to be installed over a pre-installed culvert pipe	Avoid interference of existing drainage patterns	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage
41	Section 21.7.5.1.3	Drainage	Specialist drainage contractor for surveying and creating drawings prior to and post-construction	Identify drains to ensure appropriate reinstatement and extra remediation	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
42	Section 21.7.1	Impact on utilities	Identify existing utility services and contact providers prior to construction. Undertake utility crossings in accordance with industry standard practice	Prevent disruptions to utilities	DCO Schedule 16 Protective Provisions
43	Section 21.7.1	Land use	Site selection and route refinement of cable route along field boundaries	Minimise exclusion or isolation of areas of agricultural land, areas to landowners, occupiers or the public	Embedded mitigation
44	Section 21.7.5.2.4	Impact on agricultural features	Private agreements between Norfolk Vanguard Ltd. and relevant landowners/occupiers regarding measures required in relation to crop loss	Minimise impact on agricultural land and soil resource	Landowner agreements
45	Section 21.7.1	Impact on economy	Provision of temporary access to severed fields for vehicles and machinery. And planning and timing of works	Minimise conflict and inconvenience to landowners	Embedded mitigation and DCO Schedule 1, Part 3, Requirement]20(2)(g)] CoCP – Construction method statements
46	Section 21.7.1	Hydrological impacts	Maintenance and reinstatement of drains on completion of works	Avoid long-term impact on local hydrology	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage
47	Section 21.7.1	Agricultural features	Reinstatement of fences, re-planting sections of hedgerows, hedgebanks,	Avoid long-term impact on landscape character and	Outline Landscape and Ecological Management

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			ditches and culverts removed or disturbed during construction	hydrology	Strategy (OLEMS) and DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme
Operations and Maintenance					
48	Section 21.7.6.5	Public health	Comply with Government policy on Electromagnetic Fields (EMF) exposure limits	Minimise impacts to health	Embedded mitigation and DCO Schedule 1, Part 3, Requirement [20(2)(a)] CoCP – Relevant health, safety and environmental legislation and compliance
49	Section 21.7.6.2	Permanent land use change/ landscape character	Maintenance of any newly planted sections of hedgerow, shelterbelts and woodlands following construction	Avoid failure of reinstatement works	OLEMS and DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme
	Section 21.7.1	Drainage and flooding	An attenuation pond at the onshore project substation and National Grid substation extension will accommodate additional impermeable ground.	Avoid interference of existing drainage patterns	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Decommissioning					
50	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan
Chapter 22 Onshore Ecology					
Construction					
51	Section 22.7.6.1.2	Woodland	HDD techniques to be used to avoid areas of mixed lowland deciduous woodland which cannot be avoided during route selection, including: • Witton Hall Plantation; and • King's Beck	Minimise impact on woodland habitat	DCO Schedule 1, Part 3, Requirement [18], OLEMS and DCO Schedule 1, Part 3, Requirement [24] Ecological Management Plan (EMP)
52	Section 22.7.1.3.2	Impacts to key environmental features	Commitment to trenchless crossing techniques at key sensitive environmental features, including but not limited to; waterways, protected wildlife sites and woodlands to avoid significant environmental	Avoids impacting sensitive habitats	DCO Schedule 1, Part 3, Requirement [18] and DCO Schedule 1, Part 3, Requirement [24] Ecological Management Plan (EMP)

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			disturbance. These include avoiding specific features such as; • Wendling Carr County Wildlife Site; • Little Wood County Wildlife Site; • Land South of Dillington Carr County Wildlife Site; • Kerdiston proposed County Wildlife Site; • Marriott's Way County Wildlife Site / Public Right of Way (PRoW); • Paston Way and Knapton Cutting County Wildlife Site; • Norfolk Coast Path; • Witton Hall Plantation along Old Hall Road; • King's Beck; • River Wensum; • River Bure; • Wendling Beck; • Wendling Carr; and • North Walsham and Dilham Canal.		
53	Section 22.7.6.2.2	Country Wildlife Sites	HDD techniques to be used at all County Wildlife Sites (CWS) crossed by the onshore infrastructure	Avoid impacts upon habitats contained within these sites.	DCO Schedule 1, Part 3, Requirement [18)]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
54	Section 22.7.6.5.6	Hedgerows	Reinstate any hedgerow or sections of hedgerow removed on completion of each section of work. The maximum length of hedgerow gap created during the two-year duct installation phase is 25m to allow for non-perpendicular crossings.	Minimises impact on hedgerows and the associated habitat provided	OLEMS, DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme, DCO Schedule 1, Part 3, Requirement [25] EMP and DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
55	Section 22.7.6.5.6	Hedgerows	During the cable-pull phase (after completion of the trenching of the ducts), the maximum length of hedgerow gap created will be no wider than 6m and the number of gaps will be minimised as far as possible	Minimises impact on hedgerows and the associated habitat provided	OLEMS, DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme, DCO Schedule 1, Part 3, Requirement [24] EMP and DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
56	Section 22.7.6.5.6	Hedgerows	Hedgerow removal will be programmed for winter where possible, to give bats time to adjust to the change prior to maternity period.	Reduces impacts on bats	OLEMS, DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme, DCO Schedule 1, Part 3, Requirement [24] EMP

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
					and DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
57	Section 22.7.1.3.4	Construction schedule	The construction programme has been planned such that the duration of time spent on construction of each section of the onshore cable route is minimised	Minimise the time ecological receptors are subjected to impacts from construction	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
58	Section 22.7.1.4	Construction related impacts on ecological receptors	Mitigation and control measures set out in the Ecological Impact Assessment will be delivered via the OLEMS. The OLEMS will ensure that all mitigation proposed within the EcIA is joined up and is part of an integrated management strategy	Implementation of mitigation measures	DCO Schedule 1, Part 3, Requirement [24] - EMP
59	Section 22.7.1.4	Construction related impacts on ecological receptors	The OLEMS provides detail on planting schemes, in line with mitigations set out in Chapter 29 Landscape and Visual Impact Assessment of the ES.	Implementation of mitigation measures	DCO Schedule 1, Part 3, Requirement [24] - EMP
60	Section 22.7.3.1.5	Ecological designation	HDD techniques will be employed to cross the River Wensum SAC and SSSI	Avoidance of River Wensum SAC and the habitats/features it supports	DCO Schedule 1, Part 3, Requirement [18)]
61	Section 22.7.6.3.6	Impacts upon habitats that support protected	All arable field margins identified in the 2017 Extended phase 1 Habitat	Reduce permanent impact to	DCO Schedule 1, Part 3, Requirement [24] -

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
		species	Surveys or during post-consent surveys of the unsurveyed areas will be recorded, and these habitats will be reinstated post-construction, where possible	habitat	EMP
62	Section 22.7.3.1.9	Ancient woodland	The onshore cable route will not extend within 15m of any of the following woodlands: • Old Lane Carr; • Bacton Wood; • The Leaselands; • Sparham Grove; • Old Carr (Dillington); • North Grove; and • Great Wood.	Avoidance of ancient woodland, so minimising impacts arising from construction	Embedded mitigation
63	Section 22.7.3.1.9	Drainage	A Surface Water and Drainage Management Plan will be produced for all components of the onshore infrastructure prior to construction which will address the management of changes to local hydrology	Sets out mitigations relevant to hydrology which could impact ecological receptors	DCO Schedule 1, Part 3, Requirement [20(2)(i)] CoCP – Surface water and drainage
64	Section 22.7.6.4.6	Hedgerows and trees	A pre-construction arboricultural walkover survey will be undertaken by an appropriately experienced arboriculturalist	Minimise impacts to trees and hedgerows identified to support birds or bats	DCO Schedule 1, Part 3, Requirement [24] - EMP
65	Section 22.7.6.9.6	Protected species	Pre-construction survey for badgers will be undertaken. Any active setts	Minimise impacts to badgers	DCO Schedule 1, Part 3, Requirement [24] -

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			within the onshore infrastructure will be closed and artificial setts created elsewhere. A protected buffer zone of 30m will be implemented around all setts outside of the onshore infrastructure within the study area. Precautionary measures are to be adopted when working on sections in the vicinity of badger setts including the covering of trenches greater than 1m depth at the end of each working day		EMP
66	Section 22.7.6.11.6	Protected species	A pre-construction survey for water voles will be undertaken prior to work to identify current distribution of water voles within the habitat and species study area, and post-construction monitoring during breeding season one year after completion of construction will also be undertaken	Minimise impacts to water voles	DCO Schedule 1, Part 3, Requirement [24] - EMP
67	Section 22.7.6.12.6	Protected species	Where possible, night time working near watercourses will be avoided or else minimised, and adherence to measures set out in OLEMS	Minimise impact to otters	DCO Schedule 1, Part 3, Requirement [24] - EMP
68	Section 22.7.6.13.6	Protected species	A Precautionary Method of Working (PMoW) is to be agreed in consultation with relevant SNCBs	Reduce impacts to great crested newts and reptiles	DCO Schedule 1, Part 3, Requirement [24] -

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			prior to construction. Measures for the PMoW will be set out in the OLEMS		EMP
	Section 22.7.6.17.4	Protected species	Where suitable habitat to support spawning bullhead or brown trout have been identified, pre-construction surveys will be undertaken to assess suitability of the substrate and ecological supervision immediately prior to works will be provided. Where either species is present, temporary working restrictions may be required at such locations	Mitigate impacts to spawning bullhead and brown trout	DCO Schedule 1, Part 3, Requirement [24] - EMP
69	Section 22.7.6.19.6	Invasive species	Development of an Invasive Species Management Plan in agreement with the Environment Agency containing a plan of all invasive species locations, a protocol for removing Japanese knotweed, and good site practice measures for managing the spread of invasive species. An Ecological Clerk of Works will be appointed during construction	Minimise risk of impacts from invasive species	DCO Schedule 1, Part 3, Requirement [24] - EMP and DCO Schedule 1, Part 3, Requirement [20(2)(m)] CoCP - Invasive species management

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Operations and Maintenance					
70	Section 22.7.1.4	Protected species	A lighting scheme will be designed and implemented for the permanent infrastructure, which is expected to include measures to minimise light spill and be designed in line with the 'Bats and Lighting in the UK' guidance (BCT, 2009)	Reduce impact to bats	DCO Schedule 1, Part 3, Requirement [20(2)(c)] CoCP - Artificial light emissions
Decommissioning					
71	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan
Chapter 23 Onshore Ornithology					
Construction					
72	Section 23.7.1	Impact on ornithology and associated habitats	Extensive constraints mapping and site selection process, incorporating ecological considerations, and route refinement processes to avoid significantly sensitive receptors.	Avoidance of impacts to selected ornithology and associated designated sites	Embedded mitigation

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			Measures include implementing a minimum buffer of 15m around all ancient woodland, minimising hedgerow crossings and avoidance of watercourses and ponds		
73	Section 23.7.1	Impact to ornithology and associated habitats	Trenchless crossing techniques, horizontal directional drilling (HDD), are to be used at mixed lowland deciduous woodlands (Witton Hall Plantation and King's Beck), and main watercourses (Rivers Wensum and Bure, King's Beck, Wendling Beck and Dilham Canal) which cannot be avoided	Avoidance of impacts on receptor or associated features	DCO Schedule 1, Part 3, Requirement [18)]
74	Section 23.7.1 Section 23.7.2	Impact to habitat and nesting sites	Commit to reinstating any hedgerow (or section of hedgerow) removed using hedgerow types matching the existing hedgerow, where possible	Restoring habitat for birds	DCO Schedule 1, Part 3, Requirement [24] EMP
75	Section 23.7.1	Impact to habitat and nesting sites	Limit the maximum hedgerow gap during construction to 20m, and 6m beyond the two-year duct installation phase	Minimise physical impact to habitat	DCO Schedule 1, Part 3, Requirement [24] - EMP
76	Section 23.7.1 Section 23.7.6.3.6	Impact to nesting birds	Hedgerow removal will be undertaken outside of the bird nesting season (from March to August, although can commence earlier or later depending on the	Minimise impact to nesting birds	DCO Schedule 1, Part 3, Requirement [24] - EMP

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			weather conditions)		
77	Section 23.7.1	Duration of impact	Construction programme for onshore works has been designed to minimise duration and extent of impacts at any given location along the cable route. Works around watercourses will only occur during the two-year duct installation phase	Minimise duration of impact to ornithology and associated features	DCO Schedule 1, Part 3, Requirement [24] - EMP
	Section 23.7.6.1.7	Impacts to statutory designated sites	Adherence to JNCC's scheme to reduce disturbance to waterfowl during severe winter weather during construction works at the landfall and along the onshore cable route in areas within 5km of the Broadland SPA and Ramsar site	Minimising impacts to ornithology	DCO Schedule 1, Part 3, Requirement [24] - EMP
78	Section 23.7.6.1.7	Impacts to habitats suitable for birds	All habitat which is temporarily lost during construction will be reinstated following completion of construction	Reduction on impact to ornithology	DCO Schedule 1, Part 3, Requirement [24] - EMP
79	Section 23.7.6.3.6	Impacts to ground nesting birds	Keep the winter crop stubble within the onshore project area low during construction phase	Minimise chance of notable ground nesting birds nesting prior to mobilisation	DCO Schedule 1, Part 3, Requirement [24] - EMP
80	Section 23.7.6.3.6	Impacts to ground nesting birds	Set aside ground-nesting bird areas outside of 50m of the cable route prior to construction works following the RSPB's Skylark: Advice for Farmers in creating skylark habitat	Minimise impacts to ground nesting birds	DCO Schedule 1, Part 3, Requirement [24] - EMP

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
81	Section 23.7.6.2.6	Impacts to lapwing	Habitats suitable for lapwing within the onshore substation area will only be subjected to works for one winter period in any one area in consecutive years. All habitat temporarily lost during construction will be reinstated following completion of construction	Reduce impacts to lapwing	DCO Schedule 1, Part 3, Requirement [24] - EMP
Operations and Maintenance					
82	Section 23.7.7.2.4	Impacts to protected species	A lighting scheme will be designed for the final design for the permanent infrastructure, including measures to minimise light spill following BCT Artificial Lighting and Wildlife guidance (2014)	Reduce the impacts of artificial light to birds and other protected species	DCO Schedule 1, Part 3, Requirement [20(2)(c)] CoCP - Artificial light emissions
Decommissioning					
83	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 24 Traffic and Transport					
Construction					
84	Section 24.7.7.1	Impacts to local community	Consolidating HGVs and construction employee movements at Mobilisation Areas prior to leaving site.	Reduce vehicle movements along more sensitive local routes, Minimise individual journey distances	DCO Schedule 1, Part 3, Requirement [21] - Traffic Management Plan (TMP), Travel Plan (TP)
85	Section 24.7.7.1	Range of impacts	Development of a Traffic Management Plan (TMP) to manage employee and HGV movements to the parameters assessed	Reduce impacts from travel associated with the project	DCO Schedule 1, Part 3, Requirement [21] - TMP
86	Section 24.7.7.1 and section 24.7.7.2	Impacts on amenity and severance	For link 69 the following applies: • Extend construction programme for section 16a of the duct installation; • Locate the reception sides of TC 14 and TC 15 to the area which link 69 serves; and • Sequential planning of construction activities to reduce HGV demand. For link 42 • Extend construction programme for TC 6; • Sequential planning of construction activities to reduce HGV demand	Reduction of impacts on sensitive receptors including link 69, link 42, link 47c and link 49.	DCO Schedule 1, Part 3, Requirement [21] - TMP

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			For link 47c, 49: • Extend construction programme for TC16; and Sequential planning of construction activities to reduce HGV demand		
87	Section 24.7.7.2.6	Impacts on amenity and severance	Enhanced TMP measures to include: Driver training and toolbox talks Driver information packs to include: • Delivery timing constraints (e.g. school arrival/departure times); • HGV delivery routes; • Diversion routes; and • Identify safe areas to pull over to reduce the effect of slow moving platoons of vehicles Safety Awareness – Educate drivers to report 'near misses' Engagement structure – to provide clear governance and reporting (stakeholders) structure Monitoring and Reporting – To monitor traffic flows at mobilisation areas and the onshore project substation Contact information at all roadwork sites and robust complaint response	Ensure that all HGV drivers understand the likely traffic impacts of HGV movements, and how they can minimise these.	DCO Schedule 1, Part 3, Requirement [21] - TMP

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			standards (7 days)		
88	Section 24.7.7.2	Impact on local community (amenity)	Limit delivery windows on travel using links 47c and 49 so that no HGV movements occur within the village coinciding with school drop off and pick up times (8-9am and 3-4pm respectively)	Minimise disruption/impact to local community	DCO Schedule 1, Part 3, Requirement [21] - TMP
89	Section 24.7.7.3	Impact on road safety at access points	An Outline Access Management Plan has been produced and delivered alongside the DCO application detailing generic designs of each access type (to relevant standards). Exact designs of each access will be agreed with Norfolk County Council and Highways England post DCO application.	Minimise impacts to road safety	DCO Schedule 1, Part 3, Requirement [22] - Access Management Plan (AMP)and Highway accesses
90	Section 24.7.7.3	Impact on road safety at access points	All new access points will be subject to an independent road safety audit	Reduce impacts to road safety	DCO Schedule 1, Part 3, Requirement [22] - Access Management Plan (AMP)
Operations and Maintenance					
n/a	n/a	n/a	n/a	n/a	n/a
Decommissioning					
91	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.		Decommissioning Plan
Chapter 25 Noise and Vibration					
Construction					
92	Section 25.8.5.6	Range of impacts	Adopt general good practice construction noise management measures to be implemented through the CoCP	Reduce impacts to noise sensitive receptors	DCO Schedule 1, Part 3, Requirement [20(2)(e)] CoCP – Construction noise
93	Section 25.8.5.6.1	Noise and vibration impacts to sensitive receptors	• Production of a Noise Management Plan prior to the construction phase, which will set out the Best Practicable Means (BPM) to be followed, for example: • Where possible, locating temporary plant so that it is screened from receptors by on-site structures, such as site cabins; • Using modern, quiet equipment and ensuring such equipment is properly maintained and operated by trained staff;	Minimise noise impacts of construction activities and plant	DCO Schedule 1, Part 3, Requirement [20(2)(e)] CoCP – Construction noise

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			• Applying enclosures to particularly noisy equipment where possible; • Ensuring that mobile plant is well maintained such that loose body fittings or exhausts do not rattle or vibrate; • Ensuring plant machinery is turned off when not in use; • Providing local residents with 24-hour contact details for a site representative in the event that disturbance due to noise from the construction works is perceived; and • Establishing a community engagement process including informing local residents about the construction works, detailing the timing and duration of any particularly noisy elements, and providing a contact telephone number to them; • Keeping noisy deliveries to the middle of the day where possible.		
94	Section 25.8.5.7	Noise impacts to sensitive receptors	Installation of localised screening or temporary soil bunds to be undertaken in areas in close proximity to particularly sensitive receptors	Reduce impacts to noise sensitive receptors	DCO Schedule 1, Part 3, Requirement [20(2)(e)] CoCP – Construction noise

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
95	Section 25.8.5.7	Noise impacts to sensitive receptors	Careful scrutiny of plant selection at the procurement stage for noise emissions	Minimise noise impacts of construction activities and plant	DCO Schedule 1, Part 3, Requirement [20(2)(e)] CoCP – Construction noise
Operations and Maintenance					
96	Section 25.8.6	Operational impacts to sensitive receptors	Applying Best Available Techniques (BAT) during the design phase and to any sound emitting mobile and fixed plant included in the onshore infrastructure. Onshore infrastructure will be operated and managed by adhering to DCO requirements	Operational noise levels at nearest residential receptors will not exceed 35dBA	DCO Schedule 1, Part 3, Requirement [27]
97	Section 25.8.1	Operational impacts to sensitive receptors	O&M staff will visit onshore project substation on a regular basis (e.g. weekly) to carry out routine checks and maintenance. These elements represent BAT for proactive and reactive maintenance to minimise noise.	Early detection of adverse changes in operational noise levels, triggering diagnosis and remediation of the underlying issue.	DCO Schedule 1, Part 3, Requirement [27]
Decommissioning					
98	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.		
Chapter 26 Air Quality					
Construction					
99	Section 26.7.1	Dust emissions	The programme of construction is designed to be carried out in sequential sections	Minimise land take and potential dust emissions to impact receptors	DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements
100	Section 26.7.1	Range of impacts	A CoCP which details mitigation measures to be embedded into the project will be produced and adhered to.	Minimise impacts to air quality (including dust generation)	DCO Schedule 1, Part 3, Requirement [20(2)(l)] CoCP – Air quality
101	Section 26.7.3.1.1	Human health	A detailed assessment is required where human receptors have been identified within 350m of the onshore electrical transmission works in line with IAQM guidance	Reduce air quality impacts to human health	DCO Schedule 1, Part 3, Requirement [20(2)(l)] CoCP – Air quality
102	Section 26.7.3.1.4	Impacts to air quality	Recommended mitigation measures set out in the IAQM guidance document in relation to dust and PM10 for construction activities are to be adopted throughout the construction phase of the project	Minimise impacts to air quality	DCO Schedule 1, Part 3, Requirement [20(2)(l)] CoCP – Air quality

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
103	Section 26.7.3.1.4	Impacts to dust-sensitive receptors	Carry out visual onsite and offsite inspections of dust deposition levels during construction phase	Identify and minimise dust generation	DCO Schedule 1, Part 3, Requirement [20(2)(l)] CoCP – Air quality
Operations and Maintenance					
104	n/a	n/a	n/a	n/a	n/a
Decommissioning					
105	Section 26.7.5	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan
Chapter 27 Human Health					
Construction					
106	Section 27.6.3	Biological, chemical, physical or mental impacts to humans	Potential impacts will be managed through various topic specific means (e.g. air quality measures, noise measures, etc)	Minimise impacts to human health	DCO Schedule 1, Part 3, Requirement [20(2)(e,l)] CoCP – Construction noise and Air quality and DCO Schedule 1, Part 3,

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
					Requirement [21] - TMP
107	Section 27.6.1	Biological, chemical, physical or mental impacts to humans	Extensive site selection process has aimed to ensure that infrastructure avoids residential and public spaces where possible	Reduce impacts to human health	Embedded mitigation
Operations and Maintenance					
n/a	n/a	n/a	n/a	n/a	n/a
Decommissioning					
108	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan
Chapter 28 Onshore Archaeology and Cultural Heritage					
Construction					
109	Section 28.7.1.1	Impact to heritage assets	Micro-siting of the onshore infrastructure is to be undertaken to	Avoidance of known heritage to reduce impacts	DCO Schedule 1, Part 3, Requirement [23]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			avoid non-designated above ground heritage assets where possible		DCO Schedule 1, Part 3, Requirement [20(2)(g)] CoCP – Construction method statements and DCO Schedule 1, Part 3, Requirement [23] - Onshore Written Scheme of Investigation (WSI)
110	Section 28.7.2.2	Impact to archaeology	Implementation of a temporary suspension of intrusive groundworks in any area where previously unknown remains are encountered until remains have undergone appropriate archaeological investigation. In the event of a discovery, archaeological requirements and necessary 'next steps' will be agreed in consultation with NCC HES and HE	Minimise the impact to below ground unknown archaeology	DCO Schedule 1, Part 3, Requirement 23 - Onshore WSI
111	Section 28.7.2	Impact to heritage setting	Incorporate effective, appropriate and suitable landscape screening and planting (as part of the onshore project substation design process)	Reduce indirect impacts to the settings of heritage assets	Embedded mitigation
112	Section 28.7.2.2.2	Impact on heritage landscape character	Commitment to return field boundaries and hedgerows to their	Reduce impact to the heritage landscape character	OLEMS and DCO Schedule 1, Part 3,

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			preconstruction condition and character once construction works have finished wherever possible		Requirement [18] Landscaping Management Scheme
113	Section 28.7.2.2.3	Impact on archaeology and heritage assets	Submission of a project-specific draft (outline) WSI as part of the DCO application detailing commitments to undertake additional programmes of survey and evaluation post-consent	Reduce impacts to archaeology and heritage from construction works	DCO Schedule 1, Part 3, Requirement [23] - Onshore WSI
Operations and Maintenance					
n/a	n/a	n/a	n/a	n/a	n/a
Decommissioning					
114	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Chapter 29 Landscape and Visual Impact Assessment					
Construction					
115	Section 29.7.1.2	Impact on landscape character and view	Where appropriate, smoothly profiled earthwork bunds will be created at the onshore project substation to raise the overall height and extent of vertical screening. Bunds shall be low and complement the natural flow of the surrounding landscape	Reduce the visual impact of the project	DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme)
116	Section 29.7.1.2	Visual impact	Spoil from the cut and fill works to level land for the substation will be used to create bunds for planting	Minimise the visual impact of the project substation	DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme
117	Section 29.7.5.1	Visual impact	Following construction, land over the onshore cable route, mobilisation areas, trenchless drilling compounds and running tracks would be reinstated	Reduce long-term visual impact of construction phase	DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme
118	Section 29.7.5.2	Impacts to landscape character	Removed hedgerows (including sections of hedgerow) shall be replanted in the 54m gaps created; however noting that hedgetrees and trees are not permitted to be replanted within 6-10m of the cable easement owing to restrictions of planting over cables	Reduce the impact on landscape character	DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
Operations and Maintenance					
119	n/a	Visual impact associated with permanent above ground infrastructure (onshore project substation and National Grid substation extension)	Mitigation planting to screen the onshore project substation and National Grid substation extension. In locations where it is possible to achieve advanced planting this would be implemented at the start of the construction phase, anticipated in 2020.	Reduce visual effects from sensitive viewpoints/receptors as soon as practicable.	DCO Schedule 1, Part 3, Requirement [18] Landscaping Management Scheme
Decommissioning					
120	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan
Chapter 30 Tourism and Recreation					
Construction					
121	Section 30.7.1	Impact on tourism and recreation	Careful site selection, use of buried cables, commitment to HVDC technology, concurrent duct installation for Norfolk Boreas and	Avoidance of sensitive tourism and recreational receptors	Embedded mitigation

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			use of trenchless techniques (e.g. HDD) at high sensitivity locations		
	Section 30.7.1	Impact on tourism and recreation	Use of long HDD at landfall removes the need for beach and PRoW closures along the coast. Norfolk Vanguard Limited have also committed to not using the beach car park at Happisburgh South.	Avoidance of sensitive tourism and recreational receptors	Embedded mitigation and Schedule 1, Part 3, Requirement [16(21)]
122	Section 30.7.5.4.4	Impact to communities and tourists	Production of traffic management plan with prior approval of the Local Planning Authority	Minimise disturbance to local communities and tourists	DCO Schedule 1, Part 3, Requirement [21] - TMP
123	Section 30.7.5.8.3	Impact on PRoWs	Production of CoCP detailing methodologies to be used during construction activities and requirements	Minimise impacts to tourism and recreational features such as PRoWs	DCO Schedule 1, Part 3, Requirement [20]
124	Section 30.7.1.1	Impacts to offshore tourism and recreation	Production of a Project Environmental Management Plan (PEMP)	Minimise impacts to offshore tourism and recreation	DML Schedule 12 and 14 Condition [14(1)(d)] - PEMP
125	Section 30.7.5.4.4	Impact to wildlife	OLEMS submitted alongside the ES	Minimise impacts to nature and wildlife related tourism	OLEMS and DCO Schedule 1, Part 3, Requirement [24] EMP
126	Section 30.7.1.1	Impacts to tourism and recreation	Establishment of safety zones and the communication of relevant information via a Notice to Mariners and other appropriate media, and compliance with international	Reduces impact to sea-based tourism and recreation activities	DML Schedule 12 and 14 Condition [9]

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			maritime regulations		
127	Section 30.7.1.1	Noise and vibration impacts to tourism and recreation	Adoption of Best Practical Means (BPM) and applying the principles of Best Available Technique (BAT) in relation to noise and vibration when designing the onshore infrastructure	Reduce impacts from noise and vibration on tourism and recreational receptors	DCO Schedule 1, Part 3, Requirement [20(2)(e)] CoCP – Construction noise
128	Section 30.7.5.8	Obstruction or disturbance to users of PRoW, paths and non-motorised routes	Development of a PRoW Strategy (document reference 8.4) to detail methodologies to be used during onshore construction activities, including all requirements for provision of alternative routes of linear recreation routes including long distance trails, cycle routes, PRoW and local footpath networks.	Reduce impacts on users of PRoW, minimise disruption to PRoW and provide alternative routes where necessary.	PRoW Strategy (document reference 8.4); CoCP (document reference 8.1).
Operations and Maintenance					
n/a	n/a	n/a	n/a	n/a	n/a
Decommissioning					
128	Section 30.7.5.1	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan

Reference	Cross reference to Environmental Statement	Environmental impact	Mitigation measure commitment	Effect of mitigation	Means of implementation
			in accordance with an approved Decommissioning Plan.		
Chapter 31 Socio-Economics					
Construction					
n/a	n/a	n/a	n/a	n/a	n/a
Operations and Maintenance					
n/a	n/a	n/a	n/a	n/a	n/a
Decommissioning					
129	n/a	Range of impacts	Decommissioning approach to be finalised nearer to the end of the lifetime of the project in accordance with the current legislation, policy and guidance at the time. Decommissioning would be subject to a separate licencing and consenting approach, and would be undertaken in accordance with an approved Decommissioning Plan.	Decommissioning impacts	DCO Schedule 1, Part 3, Requirement [29] - Onshore Decommissioning Plan