



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Schedule of Mitigation and Mitigation Routemap (Revision B) (Tracked)

Revision B

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Prepared by: Royal HaskoningDHV	
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Glossary of Acronyms

ADR	Air Defence Radar
ALO	Agricultural Liaison Officer
AONB	Area of Natural Beauty
ATCSMAC	Air Traffic Control Surveillance Minimum Altitude Chart
ATS	Air Traffic Services
BBPP	Breeding Bird Protection Plan
BEIS	Department for Business, Energy and Industrial Strategy
BNG	Biodiversity Net Gain
BPM	Best Practice Measures
BRE	British Research Establishment
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CDM	Construction Design Management
CNMP	Construction Noise Management Plan
COLREGs	Convention on the International Regulations for Preventing Collisions at Sea
CTMP	Construction Traffic Management Plan
CoCP	Code of Construction Practice
COSHH	Control of Substances Hazardous to Health
DCO	Development Consent Order
DEP	Dudgeon Offshore Wind Farm Extension Project
DGC	Defence Geographic Centre
DMP	Dust Management Plan
DPF	Diesel Particulate Filters
EclA	Ecological Impact Assessment

ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EPS	European Protected Species
ERCoP	Emergency Response Cooperation Plan
ERP	Emergency Response Plan
ES	Environmental Statement
ETG	Expert Topic Group
GCN	Great Crested Newt
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
IAQM	Institute of Air Quality Management
IDB	Internal Drainage Board
IMO	International Maritime Organization
INNS	Invasive, Non-Native Species
JTF	Joint Task Force
km	Kilometre
LLFA	Lead Local Flood Authority
LPA	Local Planning Authority
MAFF	Ministry of Agriculture, Fisheries and Food
MCA	Maritime and Coastguard Agency
MMP	Materials Management Plan
MMMP	Draft Marine Mammal Mitigation Protocol
MGN	Marine Guidance Note
MoD	Ministry of Defence
MSA	Minimum Sector Altitude

NCC	Norfolk County Council
NH	National Highways
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSR	Noise Sensitive Receptor
OCTMP	Outline Construction Traffic Management Plan
OREI	Offshore Renewable Energy Installation
OWIC	Offshore Wind Industry Council
PEIR	Preliminary Environmental Information Report
PPE	Personal Protective Equipment
PPG	Pollution Prevention Guidance
PRA	Preliminary Risk Assessment
PRoW	Public Rights of Way
OCTMP PSR	Outline Construction Traffic Management Plan Primary Surveillance Radar
SAC	Special Area of Conservation
SEP	Sheringham Offshore Wind Farm Extension Project
SGT	Super Grid Transformer
SHR	Shunt Reactor
SMP	Soil Management Plan
SOLAS	Safety of Life At Sea
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
TCC	Temporary Construction Compounds
TCE	The Crown Estate

TMP	Traffic Management Plan
TMZ	Transponder Mandatory Zone
TTSA	Traffic and Transport Study Area
WSI	Written Scheme of Investigation

Glossary of Terms

Order Limits	The area subject to the application for development consent, including all permanent and temporary works for SEP and DEP.
Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
DEP offshore site	The Dudgeon Offshore Wind Farm Extension consisting of the DEP wind farm site, interlink cable corridors and offshore export cable corridor (up to mean high water springs).
DEP onshore site	The Dudgeon Offshore Wind Farm Extension onshore area consisting of the DEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.
DEP North array area	The wind farm site area of the DEP offshore site located to the north of the existing Dudgeon Offshore Wind Farm
DEP South array area	The wind farm site area of the DEP offshore site located to the south of the existing Dudgeon Offshore Wind Farm
DEP wind farm site	The offshore area of DEP within which wind turbines, infield cables and offshore substation platform/s will be located and the adjacent Offshore Temporary Works Area. This is also the collective term for the DEP North and South array areas.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive. This includes candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas, and is defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach, and information to support, the EIA and HRA for certain topics.

Expert Topic Group (ETG)	A forum for targeted engagement with regulators and interested stakeholders through the EPP.
Grid option	Mechanism by which SEP and DEP will connect to the existing electricity network. This may either be an integrated grid option providing transmission infrastructure which serves both of the wind farms, or a separated grid option, which allows SEP and DEP to transmit electricity entirely separately.
Horizontal directional drilling (HDD) zones	The areas within the onshore cable route which would house HDD entry or exit points.
Infield cables	Cables which link the wind turbine generators to the offshore substation platform(s).
Interlink cables	<p>Cables linking two separate project areas. This can be cables linking:</p> <ol style="list-style-type: none"> 1) DEP South array area and DEP North array area 2) DEP South array area and SEP 3) DEP North array area and SEP <p>1 is relevant if DEP is constructed in isolation or first in a phased development.</p> <p>2 and 3 are relevant where both SEP and DEP are built.</p>
Interlink cable corridor	This is the area which will contain the interlink cables between offshore substation platform/s and the adjacent Offshore Temporary Works Area.
Integrated Grid Option	Transmission infrastructure which serves both extension projects.
Jointing bays	Underground structures constructed at regular intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Landfall	The point at the coastline at which the offshore export cables are brought onshore, connecting to the

	onshore cables at the transition joint bay above mean high water
Offshore cable corridors	This is the area which will contain the offshore export cables or interlink cables, including the adjacent Offshore Temporary Works Area.
Offshore export cable corridor	This is the area which will contain the offshore export cables between offshore substation platform/s and landfall, including the adjacent Offshore Temporary Works Area.
Offshore export cables	The cables which would bring electricity from the offshore substation platform(s) to the landfall. 220 – 230kV.
Offshore scoping area	An area presented at Scoping stage that encompassed all planned offshore infrastructure, including landfall options at both Weybourne and Bacton, allowing sufficient room for receptor identification and environmental surveys. This has been refined following further site selection and consultation for the PEIR and ES.
Offshore substation platform (OSP)	A fixed structure located within the wind farm site/s, containing electrical equipment to aggregate the power from the wind turbine generators and convert it into a more suitable form for export to shore.
Offshore Temporary Works Area	An Offshore Temporary Works Area within the offshore Order Limits in which vessels are permitted to carry out activities during construction, operation and decommissioning encompassing a 200m buffer around the wind farm sites and a 750m buffer around the offshore cable corridors. No permanent infrastructure would be installed within the Offshore Temporary Works Area.
The Applicant	Equinor New Energy Limited

SCHEDULE OF MITIGATION AND MITIGATION ROUTEMAP

1.1 Introduction

1. Equinor New Energy Limited (the Applicant) is seeking a Development Consent Order (DCO) for the Sheringham Shoal Offshore Wind Farm Extension Project (SEP) and Dudgeon Offshore Wind Farm Extension Project (DEP) which are extensions to the existing Sheringham Shoal Offshore Wind Farm (SOW) and Dudgeon Offshore Wind Farm (DOW), located in the Southern North (SNS) off the north Norfolk Coast, with the closest point to the coast being 15.8km from SEP and 26.5km from DEP.
2. SEP and DEP would have maximum export capacity of up to 786MW and have the combined potential to generate renewable power for up to 785,000 United Kingdom (UK) homes from up to 23 wind turbines at SEP and up to 30 wind turbines at DEP.
3. Further details of the Project can be found in **Chapter 4 Project Description** of the Environmental Statement (ES) (document reference 6.1.4).

1.2 Purpose of this Document

4. This document lists the mitigation proposed in the Environmental Impact Assessment (EIA) for SEP and DEP.
5. The schedules presented in **Section 1.2** and **Section 1.1** list all measures proposed on a topic-by-topic basis and signposts where the commitments made in the ES are secured in the Draft Development Consent Order (DCO) and associated documents.
6. The offshore ES chapters which **Section 1.2 (Table 1)** relates to are as follows:
 - **Chapter 6 Marine Geology, Oceanography and Physical Processes** (document reference 6.1.6) [\[APP-092\]](#)
 - **Chapter 7 Marine Water and Sediment Quality** (document reference 6.1.7) [\[APP-093\]](#)
 - **Chapter 8 benthic Ecology** (document reference 6.1.8) [\[APP-094\]](#)
 - **Chapter 9 Fish Ecology** (document reference 6.1.9) [\[APP-095\]](#)
 - **Chapter 10 Marine Mammal Ecology** (document reference 6.1.10) [\[APP-096\]](#)
 - **Chapter 11 Offshore Ornithology** (document reference 6.1.11) [\[APP-097\]](#)
 - **Chapter 12 Commercial Fisheries** (document reference 6.1.12) [\[APP-098\]](#)
 - **Chapter 13 Shipping and Navigation** (document reference 6.1.13) [\[APP-099\]](#)
 - **Chapter 14 Offshore Archaeology and Cultural Heritage** (document reference 6.1.14) [\[APP-100\]](#)
 - **Chapter 15 Aviation and Radar** (document reference 6.1.15) [\[APP-101\]](#)

- **Chapter 16 Petroleum Industry and Other Marine Users** (~~document reference 6.1.16~~) [\[APP-102\]](#)
7. The onshore ES chapters which **Section 1.1 (Table 2)** relates to are as follows:
- **Chapter 17 Ground Conditions and Contamination** [\[APP-103\]](#) (~~document reference 6.1.17~~);
 - **Chapter 18 Water Resources and Flood Risk** [\[APP-104\]](#) (~~document reference 6.1.18~~);
 - **Chapter 19 Land Use, Agriculture and Recreation (Revision B)** [\[REP2-022\]](#) (~~document reference 6.1.19~~);
 - **Chapter 20 Onshore Ecology and Ornithology (Revision C)** [\[REP3-026\]](#) (~~document reference 6.1.20~~);
 - **Chapter 21 Onshore Archaeology and Cultural Heritage** [\[APP-107\]](#) (~~document reference 6.1.21~~);
 - **Chapter 22 Air Quality** [\[APP-108\]](#) (~~document reference 6.1.22~~);
 - **Chapter 23 Noise and Vibration** [\[APP-109\]](#) (~~document reference 6.1.23~~);
 - **Chapter 24 Traffic and Transport** [\[APP-110\]](#) (~~document reference 6.1.24~~);
 - **Chapter 26 Landscape and Visual Impact Assessment** [\[APP-112\]](#) (~~document reference 6.1.26~~);
 - **Chapter 27 Socio-Economics and Tourism** [\[APP-113\]](#) (~~document reference 6.1.27~~)

1.3 Offshore Schedule of Mitigation

Table 1: Offshore Mitigation Measures

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
Chapter 6 Marine Geology, Oceanography and Physical Processes							
6.1	6.3.3	Embedded	Turbine spacing	Marine physical processes	A minimum separation distance of up to 1.05km has been defined between adjacent wind turbines within each row and between rows.	Minimises the potential for interaction between adjacent wind turbines with respect to marine physical processes.	Design Plan DCO Schedule 2, Part 1, Requirements 2-7, 6 Detailed offshore design parameters ; DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.
6.2	6.3.3	Embedded	Foundations	Sea bed disturbance	The selection of appropriate foundation designs and sizes at each wind turbine location will be made following pre-construction surveys within the wind farm sites.	Minimises the effect on sea bed level changes and identified receptor groups.	N/A
6.3	6.3.3	Embedded	Foundations	Sea bed disturbance	For piled foundation types, such as monopiles and jackets with pin piles, pile-driving will be used in preference to drilling where it is practicable to do so (i.e. where ground conditions allow). This would minimise the quantity of sub-surface sediment released into the water column from the installation process.	Minimises the quantity of sub-surface sediment released into the water column from the installation process.	Construction Method Statement DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
6.4	6.3.3	Embedded	Foundations	Sea bed disturbance	Micro-siting will be used where possible to minimise the requirements for sea bed preparation prior to foundation installation.	Minimises the requirements for sea bed preparation prior to foundation installation.	Design Plan DCO Schedule 2, Part 1, Requirements 2-7, 6 DCO Schedule 10, Part 2, conditions 1-3;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
							DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.
6.5	6.3.3	Embedded	Cables	Sea bed disturbance / habitat loss	The Applicant will make reasonable endeavours to bury cables, minimising the requirement for cable protection measures and thus effects on sediment transport. Use of external cable protection would be minimised in all cases and in the nearshore is only included for potential use at the Horizontal Directional Drilling (HDD) exit point.	Minimises the requirement for cable protection measures and thus effects on sediment transport.	Cable Laying Plan Cromer Shoal Chalk Beds (CSCB) Marine Conservation Zone (MCZ) Cable Specification and Installation Monitoring Plan (CSIMP) Scour Protection and Cable Protection Plan DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
6.6	6.3.3	Embedded	Cables	Sea bed disturbance	Route selection and micro-siting of the cables will be used to avoid areas of sea bed that pose a significant challenge to their installation, including for example areas of sand waves and megaripples. This will minimise the requirement for sea bed preparation (levelling) and the associated sea bed disturbance. This is reflected in the allowances that have been made for these works as described in ES Chapter 6 Marine Geology, Oceanography and Physical Processes [APP-092] , based on the information from the geophysical surveys conducted to date.	Minimises the requirement for sea bed preparation (levelling) and associated sea bed disturbance.	Design Plan Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 2, Part 1, Requirements 2-76; DCO Schedule 10, Part 2, conditions 1-3 and 13; DCO Schedule 11, Part 2, conditions 1-3 and 13;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
							DCO Schedule 12, Part 2, conditions 1-2 and 12; DCO Schedule 13, Part 2, conditions 1-2 and 12.
6.7	6.3.3	Embedded	Landfall	Coastal erosion	HDD will be used to install the cables at the landfall, exiting approximately 1,000m offshore. Cables will be buried at sufficient depth to have no effect on coastal erosion. Erosion would continue as a natural phenomenon driven by waves and subaerial processes, which would not be affected by SEP and DEP. Natural coastal erosion throughout the lifetime of the project has been considered within the project design by ensuring appropriate set back distances from the coast for the onshore HDD entry point. Also see reference 8.15 below regarding commitment to locating the HDD Exit within the Weybourne Channel.	Cables will be buried at sufficient depth to have no effect on coastal erosion.	Embedded in Order Limit selection and project design Design Plan DCO Schedule 2, Part 1, Requirements 2-76 DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.
Chapter 7 Marine Water and Sediment Quality							
7.1	7.3.3	Embedded	Foundations	Deterioration in water quality	For piled foundation types, such as monopiles and jackets with pin piles, pile-driving would be used in preference to drilling where it is practicable to do so (i.e. where ground conditions allow). This would minimise the quantity of sub-surface sediment that is released into the water column from the installation process.	Minimises the quantity of sub-surface sediment released into the water column from the installation process.	Project Environment Management Plan (PEMP) DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.
7.2	7.3.3	Embedded	Foundations	Deterioration in water quality	Micro-siting would be used where possible to minimise the requirements for sea bed preparation prior to foundation installation.	Minimises the requirements for seabed preparation prior to foundation installation.	Design Plan DCO Schedule 2, Part 1, Requirements 2-76 DCO Schedule 10, Part 2, conditions 1-3;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
							DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.
7.3	7.3.3	Embedded	Foundations	Deterioration in water quality	Scour protection to be used where required	Minimises the quantity of sub-surface sediment released into the water column during operation.	Scour Protection and Cable Protection Plan DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
7.4	7.3.3	Embedded	Cables	Deterioration in water quality	The Applicant will make reasonable endeavours to bury cables, minimising the requirement for external cable protection measures and thus effects related to scour. Where burial is undertaken, jetting, ploughing or cutting will be used depending on the ground conditions. Where possible sediment removed from the trench will be used as infill. Use of external cable protection would be minimised in all cases and in the nearshore is only included for potential use at the HDD exit point.	Minimises the requirement for external cable protection measures and thus effects related to scour.	Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
7.5	7.3.3	Embedded	Cables	Deterioration in water quality	Route selection and micro-siting of the cables will be used to avoid areas of seabed that pose a significant challenge to their installation, including for example areas of sand waves and megaripples. This will minimise the requirement for sea bed preparation (levelling) and the associated sea bed disturbance. This is reflected in the allowances that have been made for these works as described in ES Chapter 6 Marine Geology, Oceanography and Physical Processes [APP-092] , based on the information from the geophysical surveys conducted to date.	Minimises the requirement for seabed preparation (levelling) and associated seabed disturbance.	Design Plan Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 2, Part 1, Requirements 2-76;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
							DCO Schedule 10, Part 2, conditions 1-3 and 13; DCO Schedule 11, Part 2, conditions 1-3 and 13; DCO Schedule 12, Part 2, conditions 1-2 and 12; DCO Schedule 13, Part 2, conditions 1-2 and 12.
7.6	7.3.4	Embedded	Pollution prevention	Deterioration in water quality	The Applicant is committed to the use of best practice techniques and due diligence regarding the potential for pollution throughout all construction, operation and maintenance, and decommissioning activities. An Outline Project Environmental Management Plan (PEMP) (Revision C) [REP3-060] (document reference 9.10) sets out the details of the measures that will be taken in relation to accidental pollution events. The final PEMP would be agreed with the Marine Management Organisation (MMO) prior to construction.	Minimises the potential impacts any offshore maintenance activities will have on marine water and sediment quality.	PEMP DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.
7.7	Deadline 3 Submission - 12.11 Draft Statement of Common Ground with Marine Management Organisation (MMO) (Revision B)	Additional	Dredging	Deterioration in water quality	The Applicant is committed to undertaking additional contaminants sampling and analysis (by an accredited laboratory) at the post-consent stage for the purposes of licensing for dredge disposal material at sea.	Minimises the potential impacts associated with disposing of sediment at sea.	DCO Schedule 10, Part 2, Condition 23 DCO Schedule 11, Part 2, Condition 23 DCO Schedule 12, Part 2, condition 22 DCO Schedule 13, Part 2, condition 22
7.8	Deadline 3 Submission - 3.1.1 Draft Development Consent Order (Revision E)	Additional	Sediment sampling	Deterioration in water quality	The Applicant will submit a sample plan request in writing to the MMO for written approval.	Minimises the potential impacts associated with sampling activities.	DCO Schedule 10, Part 2, Condition 23 DCO Schedule 11, Part 2, Condition 23 DCO Schedule 12, Part 2, Condition 22 DCO Schedule 13, Part 2, Condition 22
Chapter 8 Benthic Ecology							
8.1	8.3.3.1	Embedded	Site selection	Impacts on protected species and habitats	Careful site selection of the SEP and DEP wind farm sites and offshore cable corridors has been carried out to avoid designated sites as far as possible. It has not been possible to avoid the Cromer Shoal Chalk Beds Marine Conservation	Reduces potential impacts to protected species and habitats.	N/A embedded in Order Limit selection

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					Zone (MCZ) (as detailed in ES Chapter 3 Site Selection and Assessment of Alternatives [APP-089] , however use of appropriate cable installation methodologies can help to ensure that impacts from cable installation are short term and reversible.		
8.2	8.3.3.1	Embedded	Site selection	Impacts on protected species and habitats	The offshore export cable corridor takes the shortest, most direct route possible from the SEP and DEP wind farm sites to landfall, whilst avoiding as many known sensitive benthic habitats as possible therefore reducing impacts to benthic ecology receptors. Additionally, the offshore cable corridors have been sited to avoid cable crossings where possible and there are no cable crossings in the MCZ.	Avoids as many known sensitive benthic habitats as possible and minimises the requirement for cable protection, reducing impacts to benthic ecology.	N/A embedded in Order Limit selection and project design
8.3	8.3.3.1	Embedded	Turbine size	Disturbance to benthic ecology	Larger turbines have been selected that will reduce the number of turbines (and foundations) required whilst maintaining generating capacity and therefore reduce impacts to benthic ecology.	Reduces impacts on benthic ecology receptors.	N/A embedded in project design
8.4	8.3.3.1	Embedded	Landfall	Disturbance to intertidal ecology	HDD will be used to install the export cables at the landfall, with the HDD exit point located approximately 1,000m offshore. Therefore, there will be no direct impacts on the intertidal zone due to cable installation or the landfall, as they will not be within the intertidal zone. Also see reference 8.15 below regarding commitment to locating the HDD Exit within the Weybourne Channel.	Removes potential for direct impacts on the intertidal zone.	N/A embedded in project design
8.5	8.3.3.1	Embedded	Foundations	Disturbance to benthic ecology	The selection of appropriate foundation designs and sizes at each wind turbine location will be made following pre-construction surveys within the offshore sites.	Reduces impacts on benthic ecology receptors.	N/A
8.6	8.3.3.1	Embedded	Foundations	Disturbance to benthic ecology	For piled foundation types, such as monopiles and jackets with pin piles, pile-driving will be used in preference to drilling where it is practicable to do so (i.e. where ground conditions allow). This would minimise the quantity of sub-surface sediment released into the water column from the installation process.	Minimises the quantity of sub-surface sediment released into the water column from the installation process.	Construction Method Statement DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
8.7	8.3.3.1	Embedded	Foundations	Disturbance to benthic ecology	Micro-siting will be used where possible to minimise the requirements for sea bed preparation prior to foundation installation.	Minimises the requirements for sea bed preparation prior to foundation installation and thus minimises habitat loss and	Design Plan DCO Schedule 2, Part 1, Requirements 2-7, 6 Detailed

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
						disturbance impacts on benthic ecology receptors.	offshore design parameters DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.
8.8	8.3.3.1	Embedded	Cable protection	Disturbance to benthic ecology	The Applicant will make reasonable endeavours to bury offshore cables, minimising the requirement for external cable protection measures and thus minimising habitat loss impacts on benthic ecology receptors. The minimum amount of pre-sweeping (sand wave levelling) that is required to assist with the cable installation process will be undertaken and only in relation to the interlink cables and wind farm sites.	Minimises the requirement for external cable protection measures and thus minimises habitat loss impacts on benthic ecology receptors.	Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
8.9	8.3.3.1	Embedded	Pre-sweeping (sand wave levelling)	Disturbance to benthic ecology	The minimum amount of pre-sweeping (sand wave levelling) that is required to assist with the cable installation process will be undertaken and only in relation to the interlink cables and wind farm sites.	Minimises the requirements for sea bed preparation prior to foundation and cable installation and thus minimises habitat loss and disturbance impacts on benthic ecology receptors.	Design Plan Construction Method Statement DCO Schedule 2, Part 1, Requirements 2-7, 6 Detailed offshore design parameters ; DCO Schedule 10, Part 2, conditions 1-3 and 13; DCO Schedule 11, Part 2, conditions 1-3 and 13; DCO Schedule 12, Part 2, conditions 1-2 and 12;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
							DCO Schedule 13, Part 2, conditions 1-2 and 12.
8.10	8.3.3.1	Embedded	MCZ sediment disposal	Disturbance to benthic ecology	All seabed material arising from the Cromer Shoal Chalk Beds MCZ during cable installation (namely at the HDD exit point) would be placed back within the MCZ at or close to the source, using an approach to be agreed with the MMO in consultation with the relevant Statutory Nature Conservation Bodies (SNCB). Sediment would not be disposed of in or nearby known sensitive benthic habitats and where possible will be redeposited within areas of similar sediment type.	Minimises potential impacts to sensitive species and habitats.	CSCB MCZ CSIMP Disposal Site Characterisation Report DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
8.11	8.3.3.1	Embedded	Invasive Non-Native species (INNS)	Spread of marine INNS	Use of best practice measures including appropriate vessel maintenance following International Convention for the Prevention of Pollution from Ships (MARPOL) guidance.	Reduces the risk (and impact) of spreading marine INNS	PEMP DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.
8.12	8.3.3.1	Embedded	Cable protection (MCZ)	Disturbance to benthic ecology	The allowance for external cable protection within the Cromer Shoal Chalk Beds MCZ boundary has been minimised as far as possible.	Minimises habitat loss impacts on benthic ecology receptors.	N/A
8.13	8.3.3.2	Additional	Cable protection (MCZ)	Disturbance to benthic ecology	All external cable protection systems used within the CSCB MCZ will be designed to be removable (i.e. no loose rock) with a commitment to remove it, at decommissioning, if it is deemed to be required at that time.	Minimises potential impacts to protected species and habitats.	N/A CSCB MCZ CSIMP Disposal Site Characterisation Report DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
8.14	8.3.3.2	Additional	Pre-construction surveys and micro-siting	Impacts to protected species and habitats	Pre-construction surveys will be undertaken to determine if potential Annex I / UK BAP Priority	Minimises potential impacts to protected species and habitats.	DCO Schedule 10, Part 2, Condition 18

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>Habitat <i>S. spinulosa</i> reef¹ and UK BAP priority habitat 'peat and clay exposures with piddocks' are present within the proposed wind turbine locations or offshore cable routes.</p> <p>The pre-construction survey methodology would be agreed with the MMO in consultation with Natural England. The survey design would be based on best practice at the time and is anticipated to consist of a mixture of geophysical, drop-down video (DDV) and grab surveys (as applicable) to ensure a comprehensive ground-truthing of the proposed final wind turbine locations and cable route design.</p> <p>If potential Annex I / UK BAP priority habitat <i>S. spinulosa</i> reef or UK BAP priority habitat 'peat and clay exposures with piddocks' are identified, the results of the survey will be discussed at that time with the MMO and Natural England to agree whether the features constitute Annex I / UK BAP priority habitat features and whether they are required to be avoided through micro-siting.</p>		DCO Schedule 11, Part 2, Condition 18 DCO Schedule 12, Part 2, Condition 17 DCO Schedule 13, Part 2, Condition 17
8.15	Deadline 7 Submission - 9.7.1 Outline CSCB MCZ CSIMP (Revision B) (Tracked) [document reference 9.7.1]	Additional	HDD Exit Pit Location	Impacts on Cromer Shoal Chalk Beds Marine Conservation Zone	The HDD exit pit will be located within the deep infilled channel cut through the chalk to 17m below the seabed, filled with Weybourne Channel deposits (also see Appendix 6.3 Sedimentary Processes in the Cromer Shoal Chalk Beds MCZ [APP-182] - visible on Figure 3.4), located across the export cable corridor from approximately 750m to 1.5km offshore.	Minimise impacts on Cromer Shoal Chalk Beds Marine Conservation Zone	DCO Schedules 12 and 13, Conditions 12(e)
8.16	Draft DCO (Revision K) [document reference 3.1]	Embedded	General	Impacts on benthic species and habitats	<p>The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO:</p> <p>...a mitigation scheme for any benthic habitats of conservation, ecological and/or economic importance constituting Annex I reef habitats identified by the survey referred to in condition 17(4)(a) and in accordance with the offshore in principle monitoring plan.</p>	Mitigate potential impacts on sensitive benthic habitats and species	DCO Schedules 10 and 11 Condition 13(1)(i)
8.17	Draft DCO (Revision K) [document reference 3.1]	Embedded	General	Impacts on benthic species and habitats	The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO:	Mitigate potential impacts on sensitive benthic habitats and species	DCO Schedules 12 and 13 condition 12(1)(j)

¹ Note any Annex I *S. spinulosa* reef identified would not be associated with an SAC for which *S. spinulosa* reef is a qualifying feature since the SEP and DEP offshore sites do not overlap with any SACs.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					...a mitigation scheme for any benthic habitats of conservation, ecological and/or economic importance constituting Annex I reef habitats and including the designated features of the MCZ identified by the survey referred to in condition 17(4)(a) and in accordance with the offshore in principle monitoring plan.		
Chapter 9 Fish and Shellfish Ecology							
9.1	9.3.3	Embedded	Cable burial	Impacts on fish and shellfish ecology	<p>The Applicant will make reasonable endeavours to bury offshore export cables, reducing the effects of EMF and also reducing the need for surface cable protection which reduces the introduction of hard substrate and modification of habitat. Typical burial depth for SEP and DEP cables, excluding in areas of sand waves, is expected to be between 0.5m to 1.5m (or up to 1m for the export cables). The use of single 3-core cables, compacting the circuit phases also reduces and localises the EMF significantly</p> <p>Cable burial requirements for the purpose of the environmental assessment have been informed through the completion of an export cable burial risk assessment (Pace Geotechnics, 2020) which has been produced by the Applicant at an early stage to inform the design and environmental assessment processes on advice from relevant stakeholders. The burial requirements for all cables will be finalised based on an assessment of the risks posed to the Projects in specific areas, following the completion of detailed pre-construction geotechnical and geophysical investigations and the subsequent finalisation of the cable burial risk assessment, prior to the start of construction.</p>	Reduces the effects of electromagnetic fields (EMF) and also reduces the need for surface cable protection (reduces the introduction of hard substrate and modification of habitat).	<p>Cable Laying Plan</p> <p>Scour Protection and Cable Protection Plan</p> <p>CSCB MCZ CSIMP</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>
9.2	9.3.3	Embedded	Construction	Impacts on fish and shellfish ecology	During construction, overnight working practices would be employed offshore so that construction activities could be 24 hours	Reduces the overall duration of potential impacts on fish communities in proximity to the wind farm sites.	<p>Construction Method Statement</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>
9.3	9.3.3	Embedded	Soft-start and ramp-up during piling activities	Impacts on fish and shellfish ecology	Each piling event would commence with a soft-start at a lower hammer energy, followed by a gradual ramp-up for at least 20 minutes to the maximum hammer energy required (the maximum	Minimises impact of noise on fish and shellfish.	Marine Mammal Mitigation Protocol (MMMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					hammer energy is only likely to be required at a few of the piling installation locations) to allow mobile species to move away from the area of highest noise impact. This commitment is presented in the Draft Marine Mammal Mitigation Protocol (MMMP) (Revision B) [REP1-013] (document reference 9.4) and is secured under the conditions of the draft DCO.		DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
Chapter 10 Marine Mammals							
10.1	10.3.4.1	Embedded	Soft-start and ramp-up	Underwater noise impacts to marine mammals	Each piling event would commence with a soft-start at a lower hammer energy followed, by a gradual ramp-up for at least 20 minutes to the maximum hammer energy required (the maximum hammer energy is only likely to be required at a few of the piling installation locations). The soft-start and ramp-up allows mobile species to move away from the area before the maximum hammer energy with the greatest noise impact area is reached. This commitment to soft-start and ramp-up is presented in the Draft MMMP (Revision B) [REP1-013] (document reference 9.4).	Minimises the impact of underwater noise on marine mammals.	MMMP DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
10.2 Superseded by 10.8	10.3.4.1	Embedded	Best practice to reduce vessel collision risk	Collision risk to marine mammals	Vessel movements, where possible, will follow set vessel routes and hence areas where marine mammals are accustomed to vessels, in order to reduce any increased collision risk. All vessel movements will be kept to the minimum number that is required to reduce any potential collision risk. Additionally, vessel operators will use good practice to reduce any risk of collisions with marine mammals.	Reduces potential collision risk.	Construction Method Statement DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
10.3	10.3.4.1	Embedded	Pollution prevention	Deterioration in water quality	As outlined in ES Chapter 7 Marine Sediment and Water Quality [APP-093] , the Applicant is committed to the use of best practice techniques and due diligence regarding the potential for pollution throughout all construction, operation and maintenance, and decommissioning activities. An Outline PEMP (Revision C) [REP3-060] (document reference 9.10) has been submitted alongside the DCO application to set out the details of the measures that will be taken in relation to accidental pollution events. The final PEMP would be agreed with the MMO prior to construction.	Minimises the potential impacts any offshore maintenance activities will have on marine water and sediment quality.	PEMP DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
10.4	10.3.4.2	Additional	MMMP for piling activities	Underwater noise impacts to marine mammals	<p>The MMMP for piling will be developed in the pre-construction period and based upon best available information, methodologies, industry best practice, latest scientific understanding, current guidance and detailed project design. The MMMP for piling will be developed in consultation with the relevant SNCBs and the MMO, detailing the proposed mitigation measures to reduce the risk of any physical or permanent auditory injury (PTS) to marine mammals during all piling operations.</p> <p>This will include details of the embedded mitigation, for the soft-start and ramp-up, as well as details of the mitigation zone and any additional mitigation measures required in order to minimise potential impacts of any physical or permanent auditory injury (PTS), for example, the activation of acoustic deterrent devices (ADD) (e.g. for 10 minutes) prior to the soft-start.</p> <p>A Draft MMMP (Revision B) [REP1-013] (document reference 9.4) has been submitted with the DCO application.</p>	Minimises the impact of underwater noise on marine mammals.	<p>MMMP</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>
10.5	Draft MMMP	Additional	MMMP for piling – mitigation zone	Underwater noise impacts to marine mammals	Establishment of a Mitigation Zone around the pile location before each pile driving activity, based on the maximum predicted distance for PTS	Minimises the impact of underwater noise on marine mammals.	<p>MMMP</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>
10.7	Draft MMMP (Annex 1)	Embedded	Vessel movements	Vessel collision risk	<p>Embedded mitigation to reduce vessel collision risk with marine mammals includes that vessel movements, where possible, will follow set vessel routes and hence areas where marine mammals are accustomed to vessels, in order to reduce any increased collision risk. All vessel movements will be kept to the minimum number that is required to reduce any potential collision risk.</p> <p>Operators of all vessels will be made aware of the risk and measures to avoid marine mammal collisions during mobilisation briefings. In order to reduce the risk of collisions, meetings will be undertaken with all vessel operators to promote collision awareness and avoidance, including code of conduct.</p> <p>Code of conduct for vessel operators will be produced and issued to reduce the risk of collision</p>	Minimises the risk of vessel collisions with marine mammals	<p>MMMP</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>with marine mammals across all phases of the Projects.</p> <p>The code of conduct for good practice will be developed prior to construction based on the latest information and guidance.</p> <p>The code of conduct for good practice to avoid marine mammal collisions with vessels will include, but not be limited to:</p> <ul style="list-style-type: none"> • Avoid deliberately approaching marine mammals when sighted. • Avoid abrupt changes to course or speed should marine mammals approach the vessel or bow-ride. • Where possible, vessels will maintain a steady speed, and direction, to allow any marine mammal to predict where the vessel may be headed, and to move out of the way or avoid surfacing in the path of the vessel. • An agreed minimum distance from seal haul-out sites, particularly during sensitive periods such as pupping and moulting. • Protocol to report any collisions. 		
10.6	10.3.4.2	Additional	Southern North Sea SAC SIP	Underwater noise impacts to marine mammals	<p>In addition to the MMMPs for piling and UXO clearance, a SIP for the SNS Special Area of Conservation (SAC) will be developed. The SIP will set out the approach to deliver any project mitigation or management measures to reduce the potential for any significant disturbance of harbour porpoise in relation to the SNS SAC conservation objectives.</p> <p>The SIP is an adaptive management tool, which can be used to ensure that the most adequate, effective and appropriate measures, if required, are put in place to reduce the significant disturbance of harbour porpoise in the SNS SAC.</p> <p>The SIP will be developed in the pre-construction period and will be based upon best available information and methodologies at that time, in consultation with the relevant SNCBs and the MMO.</p>	Minimises the impact of underwater noise on marine mammals.	<p>Site Integrity Plan (SIP) for the Southern North Sea Special Area of Conservation (SAC)</p> <p>DCO Schedule 10, Part 2, conditions 14 and 15;</p> <p>DCO Schedule 11, Part 2, conditions 14 and 15;</p> <p>DCO Schedule 12, Part 2, conditions 13 and 14;</p> <p>DCO Schedule 13, Part 2, conditions 13 and 14.</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					An In Principle SIP for the SNS SAC (document reference 9.6)[APP-290] has been submitted with the DCO application.		
10.7	10.3.4.2	Embedded	Disturbance at seal haul-out sites	Disturbance at seal haul-out sites	No mitigation is required for the disturbance of seals at haul-out sites. However, where possible and safe to do so, transiting vessels would maintain distances of 600m or more off the coast, particularly in areas near known seal haul-out sites during sensitive periods.	Minimises disturbance at seal haul-out sites	N/A embedded in existing vessel transit routes
10.8	Deadline 8 Submission – 9.10 Outline Project Environmental Management Plan (Revision D) [document reference 9.10]	Embedded	Best practice to reduce vessel collision risk	Collision risk to marine mammals	<p>Embedded mitigation to reduce vessel collision risk with marine mammals includes that vessel movements, where possible, will follow set vessel routes and hence areas where marine mammals are accustomed to vessels, in order to reduce any increased collision risk. All vessel movements will be kept to the minimum number that is required to reduce any potential collision risk.</p> <p>Operators of all vessels will be made aware of the risk and measures to avoid marine mammal collisions during mobilisation briefings. In order to reduce the risk of collisions, meetings will be undertaken with all vessel operators to promote collision awareness and avoidance, including code of conduct.</p> <p>Code of conduct for vessel operators will be produced and issued to reduce the risk of collision with marine mammals across all phases of the Projects.</p> <p>The code of conduct for good practice will be developed prior to construction based on the latest information and guidance.</p> <p>The code of conduct for good practice to avoid marine mammal collisions with vessels will include, but not be limited to:</p> <ul style="list-style-type: none"> Avoid deliberately approaching marine mammals when sighted. Avoid abrupt changes to course or speed should marine mammals approach the vessel or bow-ride. Where possible, vessels will maintain a steady speed, and direction, to allow any marine mammal to predict where the vessel may be headed, and to move out of the way or avoid surfacing in the path of the vessel. Additionally, where possible and safe to do so, transiting vessels will maintain distances of 600m or more off the coast, particularly in 	Reduces potential collision risk	PEMP DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					areas near known seal haul-out sites during sensitive periods. Protocol to report any collisions.		
Chapter 11 Offshore Ornithology							
11.1	11.3.3	Embedded	Site selection	Disturbance to birds offshore	Wind farm boundary site selection process: the shallow area to the northwest of the existing Dudgeon OWF was excluded from the DEP North array area boundary for technical reasons due to the shallow water depth and bathymetry, which were considered unsuitable for foundation and cable installation. In addition, Natural England advised (meeting held 29 th January 2018) that this shallow area was believed to be important for feeding birds and that it would therefore be of benefit to exclude the area from development. Following the advice from Natural England and the bathymetry analysis, this area was removed from the southern boundary of the DEP North array area.	Minimises disturbance to birds offshore	N/A embedded in Order Limit selection
11.2	11.3.3	Embedded	Air gap	Collision risk	The project designs of SEP and DEP assessed in the Preliminary Environmental Information Report (PEIR) had an air gap of 26m at Highest Astronomical Tide (HAT). This was set at a value greater than the minimum of 22m to reduce the potential collision risk for offshore ornithology receptors. Between PEIR and the production of the ES, air gap has been further increased to 30m above HAT in response to consultation feedback, providing further reduction of potential collision risk for offshore ornithology receptors.	Reduces collision risk	Design Plan DCO Schedule 2, Part 1, Requirements 2-7.6 Detailed offshore design parameters ; DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.
11.3 Superseded by 11.3	11.3.3	Embedded	Vessel movements	Best practice protocol for minimising disturbance to red-throated diver	Potential impacts on red-throated diver during operation and maintenance works will be mitigated through: <ul style="list-style-type: none">• Avoiding and minimising maintenance vessel traffic, where possible, during the most sensitive time period in October to March (inclusive);• Restricting vessel movements where possible to existing navigation routes (where the	Reduces red-throated diver (and other loafing bird) disturbance.	Construction Method Statement PEMP DCO Schedule 10, Part 2, conditions 11 and 13; DCO Schedule 11, Part 2, conditions 11 and 13;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>densities of red-throated divers are typically relatively low);</p> <ul style="list-style-type: none"> As far as possible maintaining direct transit routes (to minimise transit distances through areas used by red-throated diver); Where it is necessary to go outside of established navigational routes, avoid rafting birds either en route to the wind farm sites from port and/or within the wind farm sites (dependent on location) and where possible avoid disturbance to areas with consistently high diver density; Avoidance of over-revving of engines (to minimise noise disturbance); and Briefing of vessel crew on the purpose and implications of these vessel management practices (through, for example, tool-box talks). <p>The Project Team would make maintenance vessel operators aware of the importance of the species and the associated mitigation measures through tool-box talks.</p>		<p>DCO Schedule 12, Part 2, conditions 10 and 12;</p> <p>DCO Schedule 13, Part 2, conditions 10 and 12.</p>
11.3	Deadline 8 submission – 9.10 Outline Project Environmental Management Plan (Revision D)	Embedded	Vessel movements	Disturbance and displacement	<p>Potential impacts on red-throated diver during construction, operation and maintenance works will be mitigated through:</p> <ul style="list-style-type: none"> Where possible avoid works during the over winter period 1st November to 31st March (inclusive); Selecting routes that avoid known aggregations of birds; Restricting vessel movements to existing navigation routes (where the densities of red-throated divers are typically relatively low); Maintaining direct transit routes (to minimise transit distances through areas used by red-throated diver); Considering the potential for crew transfer vessels (CTV) to travel in convoy en route to the wind farm sites and seeking to do so where it is considered practicable; Avoidance of over-revving of engines (to minimise noise disturbance); and Briefing of vessel crew on the purpose and implications of these vessel management practices (through, for example, tool-box talks). 	Reduces red-throated diver (and other loafing bird) disturbance.	<p>PEMP</p> <p>DCO Schedule 10, Part 2, condition 11;</p> <p>DCO Schedule 11, Part 2, condition 11;</p> <p>DCO Schedule 12, Part 2, condition 10;</p> <p>DCO Schedule 13, Part 2, condition 10.</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					The Project Team would make maintenance vessel operators aware of the importance of the species and the associated mitigation measures through tool box talks.		
11.4	Deadline 7 Submission - 13.3.1 Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision D) (Tracked)	Additional	Export cable laying vessel	Disturbance and displacement Greater Wash SPA red-throated divers	Seasonal restriction between 1st November and 31st March on export cable laying activity within the SPA	Minimise Impacts on Greater Wash SPA red-throated divers	DCO Schedules 12 and 13, Part 2, Condition 24
11.5	Deadline 8 Submission - 13.3.1 Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision E) (Tracked)	Embedded	Physical presence of turbines within the SEP wind farm site	Disturbance and displacement of Greater Wash SPA red-throated divers	Turbine restriction zones within the southeast and southwest corners of the SEP wind farm site as shown in the top right hand pane of Figure 3 of the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision E) (document reference 13.3).	Minimise Impacts on Greater Wash SPA red-throated divers	Works Plans (Offshore) (Revision D)
Chapter 12 Commercial Fisheries							
12.1	12.3.3	Embedded	Cable protection and maintenance	Displacement, and snagging of fishing gear.	Where possible, cable burial will be the preferred option for cable protection. External cable protection and cable maintenance as per the Outline CSIMP.	Minimises displacement and risk of snagging of fishing gear.	Cable Laying Plan Scour Protection and Cable Protection Plan CSIMP DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
12.2	12.3.3	Embedded	Communication	Displacement and snagging of fishing gear.	Advance warning and accurate location details of construction, maintenance and decommissioning operations, associated Safety Zones and advisory passing distances will be given via Notices to Mariners (NtM) and Kingfisher Bulletins.	Minimises displacement risk of snagging of fishing gear.	Notifications and Inspections DCO Schedule 10, Part 2, condition 7; DCO Schedule 11, Part 2, condition 7; DCO Schedule 12, Part 2, condition 6; DCO Schedule 13, Part 2, condition 6.
12.3	12.3.3	Embedded	Liaison	Displacement and disruption	Ongoing liaison with fishing fleets will be maintained during construction, maintenance and decommissioning operations via an appointed	Minimises risk, displacement and disruption.	PEMP Fisheries Liaison and Coexistence Plan

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					Fisheries Liaison Officer and Fishing Industry Representative.		DCO Schedule 10, Part 2, conditions 11 and 13; DCO Schedule 11, Part 2, conditions 11 and 13; DCO Schedule 12, Part 2, conditions 10 and 12; DCO Schedule 13, Part 2, conditions 10 and 12.
12.4	12.3.3	Embedded	Marking and lighting	Navigation and snagging risk	Aids to navigation (marking and lighting) will be deployed in accordance with the latest relevant available standard industry guidance and as advised by Trinity House, Maritime and Coastguard Agency (MCA) and Civil Aviation Authority (CAA) and Ministry of Defence (MoD) as appropriate.	Minimises risk of navigational hazards and snagging of fishing gear.	-Secured through the DCO/DML Schedule 10, Part 2, conditions 8 and 10; DCO Schedule 11, Part 2, conditions 8 and 10; DCO Schedule 12, Part 2, conditions 7 and 9; DCO Schedule 13, Part 2, conditions 7 and 9.
12.5	12.3.3	Embedded	Update nautical charts	Displacement and disruption	The United Kingdom Hydrographic Office (UKHO) will be notified of both the commencement (within two weeks), progress and completion of offshore construction works (within two weeks) to allow marking of all installed infrastructure on nautical charts.	Minimises risk of navigational hazards and snagging of fishing gear.	Secured through the DCO/DML Schedule 10, Part 2, condition 7; DCO Schedule 11, Part 2, condition 7; DCO Schedule 12, Part 2, conditions. 6; DCO Schedule 13, Part 2, conditions 6
12.6	12.3.3	Embedded	Fisheries Liaison and Co-existence Plan (FLCP)	Displacement and disruption	A FLCP will be developed pre-construction establishing a distribution system for ongoing liaison plans and dissemination of information, including survey schedules, construction schedules and planned operations and maintenance activities using a variety of media. In relation to offshore construction, the Applicant commits to distributing notices and information to the fishing community not less than 2 weeks prior to commencement of activities. Details on	Minimise displacement and disruption to fishers.	PEMP Fisheries Liaison and Coexistence Plan DCO Schedule 10, Part 2, conditions 11 and 13; DCO Schedule 11, Part 2, conditions 11 and 13;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					timescales of information provision will be added to the FLCP.		DCO Schedule 12, Part 2, conditions 10 and 12; DCO Schedule 13, Part 2, conditions 10 and 12.
12.7	12.3.3	Embedded	Liaison and best practice	Displacement and disruption	Recommendations For Fisheries Liaison: Best Practice' guidance for offshore renewable developers (FLOWW 2014 and 2015; BERR, 2008) guidance will be followed where appropriate.	Minimise displacement and disruption to fishers	-Fisheries Liaison and Coexistence Plan DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.
12.8	12.3.3	Embedded	Safety zones	Navigation risk and risk of snagging	Safety zones of up to 500m will be applied during construction, maintenance and decommissioning phases. Where defined by risk assessment guard vessels will also be used to ensure adherence with Safety Zones or advisory passing distances to mitigate impacts which pose a risk to surface navigation during construction, maintenance and decommissioning phases.	Minimises navigation and snagging risk.	xx DCO Schedule 10, Part 2, condition 13 DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, conditions 12; DCO Schedule 13, Part 2, conditions 12.
12.9	12.3.3	Embedded	Claims for loss or damage of gear	Risk to gear	In the instance that snagging does occur, the developer would work to the protocols laid out within the guidance by the FLOWW group and 'Recommendations For Fisheries Liaison: Best Practice' guidance for offshore renewable developers, in particular section 9: Dealing with claims for loss or damage of gear (FLOWW, 2014; BERR, 2008).	Minimises risk to gear.	N/A -Fisheries Liaison and Coexistence Plan PEMP DCO Schedule 10, Part 2, conditions 11 and 13; DCO Schedule 11, Part 2, conditions 11 and 13; DCO Schedule 12, Part 2, conditions 10 and 12; DCO Schedule 13, Part 2, conditions 10 and 12.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
12.10	12.6	Additional	Disruption and cooperation agreements	Displacement and disruption	Justifiable disruption and cooperation agreements between SEP and/or DEP and commercial fishing vessel owners on an individual basis. Emphasis on ensuring that the effect of reduced access is mitigated by removing that effort to ensure that it is not moved or displaced elsewhere. This can be delivered in a number of ways, such as the requirement for fishing gear that is subject to a cooperation agreement to be wet or dry stored	Minimise impacts resulting from displacement	Fisheries Liaison and Coexistence Plan PEMP DCO Schedule 10, Part 2, conditions 11 and 13; DCO Schedule 11, Part 2, conditions 11 and 13; DCO Schedule 12, Part 2, conditions 10 and 12; DCO Schedule 13, Part 2, conditions 10 and 12.
12.11	Deadline 7 submission – 9.8.1 Outline Fisheries Liaison and Co-existence Plan (Revision B) (Tracked)	Additional	Disruption and cooperation agreements	Displacement and disruption	When the precise landfall location for the export cable is defined, including landward compounds and access, consultation with the local Weybourne fishermen will be undertaken to arrange and agree access for beach-launching and landing of fishing boats with the aim to minimise disruption.	Minimise impacts resulting from displacement	Fisheries Liaison and Coexistence Plan PEMP DCO Schedule 10, Part 2, conditions 11 and 13; DCO Schedule 11, Part 2, conditions 11 and 13; DCO Schedule 12, Part 2, conditions 10 and 12; DCO Schedule 13, Part 2, conditions 10 and 12.
Chapter 13 Shipping and Navigation							
13.1	13.3.3	Embedded	Lighting and marking	Risk to navigation, safety, and emergency response	Lighting and marking in consultation and agreement with Trinity House, MCA, and the CAA, and considering G1162 (IALA, 2021) including an Aids to Navigation (AtoN) Management Plan covering the construction period.	Minimises navigation risk	DCO Schedule 10, Part 2, conditions 8; and 10; DCO Schedule 11, Part 2, conditions 8; and 10; DCO Schedule 12, Part 2, conditions 7; and 9; DCO Schedule 13, Part 2, conditions 7 and 9.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
13.2	13.3.3	Embedded	Application for safety zones	Risk to navigation, safety, and emergency response	Application for safety zones during construction and periods of major maintenance. Application for safety zones will be made post consent under 'The Electricity (Offshore Generating Stations) (Safety Zones) (Applications Procedures and Control of Access) Regulations 2007	Minimises navigation risk	N/A
13.3	13.3.3	Embedded	Compliance with international maritime law	Risk to navigation, safety, and emergency response	Compliance by all project vessels with International maritime law and flag state regulations including Convention on the International Regulations for Preventing Collisions at Sea (COLREGS) (International Maritime Organization (IMO), 1972) and Safety of Life at Sea (SOLAS) (IMO, 1974).	Minimises navigation risk	N/A embedded requirement
13.5	13.3.3	Embedded	Agreement of layout	Risk to navigation, safety, and emergency response	Layout will be discussed and agreed with the MCA and Trinity House. It is noted that the final layout will comply with MGN 654 and the agreed layout principles	Minimises navigation risk	DCO Schedule 10, Part 2, condition 13 DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, conditions 12; DCO Schedule 13, Part 2, conditions 12.
13.6	13.3.3	Embedded	Compliance with MGN 654	Risk to navigation, safety, and emergency response	Compliance with all aspects of Marine Guidance Note (MGN) 654 and annexes.	Minimises navigation risk	DCO Schedule 10, Part 2, condition 16; DCO Schedule 11, Part 2, condition 16; DCO Schedule 12, Part 2, conditions 15; DCO Schedule 13, Part 2, conditions 15
13.7	13.3.3	Embedded	Marine Coordination	Risk to navigation, safety, and emergency response	Dedicated onshore base from where the project including associated vessel movements will be coordinated and managed. There will be close cooperation and coordination between the existing sites and SEP and DEP.	Minimises navigation risk	N/A
13.8	13.3.3	Embedded	Promulgation of information	Risk to navigation, safety, and emergency response	Promulgation of Information: Advance warning and accurate location details of construction, maintenance and decommissioning operations, associated Safety Zones and advisory passing distances will be given via NtM and Kingfisher Bulletins and other appropriate media.	Minimises navigation risk	DCO Schedule 10, Part 2, condition 7; DCO Schedule 11, Part 2, condition 7; DCO Schedule 12, Part 2, conditions 6; DCO Schedule 13, Part 2, conditions 6
13.9	13.3.3	Embedded	Development of ERCoP	Risk to navigation, safety, and emergency response	Emergency Response Cooperation Plan (ERCoP) to be completed in the required format and	Minimises navigation risk	DCO Schedule 10, Part 2, condition 16;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					structure (MCA, 2019), and to be updated and agreed on a live basis in liaison with the MCA.		DCO Schedule 11, Part 2, condition 16; DCO Schedule 12, Part 2, conditions 15; DCO Schedule 13, Part 2, conditions 15
13.10	13.3.3	Embedded	Use of guard vessels	Risk to navigation, safety, and emergency response	Use of guard vessels, where identified as necessary via risk assessment, as required under MGN 654.	Minimises navigation risk	DCO Schedule 10, Part 2, condition 12 DCO Schedule 11, Part 2, condition 12; DCO Schedule 12, Part 2, conditions 11; DCO Schedule 13, Part 2, conditions 11.
13.11	13.3.3	Embedded	Display of project infrastructure on appropriately scaled nautical charts	Risk to navigation, safety, and emergency response	Display of project infrastructure on appropriately scaled nautical charts, including cables.	Minimises navigation risk	DCO Schedule 10, Part 2, condition 7; DCO Schedule 11, Part 2, condition 7; DCO Schedule 12, Part 2, conditions 6; DCO Schedule 13, Part 2, conditions 6
13.12	13.3.3	Embedded	Cable burial risk assessment	Snagging risk	Cable Burial Risk Assessment undertaken pre-construction, including consideration of under keel clearance.	Reduction of snagging risk	DCO Schedule 10, Part 2, condition 13 DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, conditions 12; DCO Schedule 13, Part 2, conditions 12
13.13 4	13.3.3	Embedded	Monitoring arrangements	Risk to navigation, safety, and emergency response	Monitoring arrangements to be agreed with the MCA before construction, including marine traffic monitoring during and post construction (over 3 years) and hydrographic surveys (as per MGN 654 (MCA, 2021)).	Minimises navigation risk	Secured through the DCO/DML Schedule 10, Part 2, conditions 18, 19 and 20; DCO Schedule 11, Part 2, conditions 18, 19 and 20; DCO Schedule 12, Part 2, conditions 17, 18 and 19; DCO Schedule 13, Part 2, conditions 17, 18 and 19.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
13.14 5	13.3.3	Embedded	Stakeholder Consultation	Risk to navigation, safety, and emergency response	Stakeholder consultation will continue to be undertaken by the Applicant and commercial and technical agreements put in place where required ahead of construction.	Minimises navigation risk	DCO Schedule 10, Part 2, condition 18; DCO Schedule 11, Part 2, condition 18; DCO Schedule 12, Part 2, condition 17; DCO Schedule 13, Part 2, conditions 17.
13.15 8	13.5	Additional	Navigation management plan	Risk to navigation, safety, and emergency response	Developed post consent to mitigate impacts associated with crew transfer vessels. To include a list of stakeholders to whom information will be promulgated.	Minimises navigation and collision risk	DCO Schedule 10, Part 2, condition 13 DCO Schedule 11, Part 2, condition 13 ; DCO Schedule 12, Part 2, conditions 12 ; DCO Schedule 13, Part 2, conditions 12 12 N/A
Chapter 14 Offshore Archaeology and Cultural Heritage							
14.1	14.3.3	Additional	Written Scheme of Investigation (WSI)	Interaction with heritage assets	<p>Additional mitigation measures for Chapter 14 Offshore Archaeology and Cultural Heritage [APP-100] comprise:</p> <ul style="list-style-type: none"> • Geoarchaeological assessment; • Archaeological assessment of further geophysical data to be acquired post-consent; • Refinement of the design of offshore infrastructure post consent to avoid Archaeological Exclusion Zones (AEZs) and additional geophysical anomalies of potential archaeological interest (where possible); • Further investigation where avoidance is not possible and additional mitigation to reduce or offset impacts should impacts be unavoidable; and • Implementation of a protocol for archaeological discoveries to address unexpected discoveries which might be encountered during the course of planned activities. <p>A proposed approach to the delivery of this additional mitigation, post-consent, and how the outcomes of additional investigation will influence the final design of the Projects, is set out in the Outline WSI (Offshore) (document reference: 9.14)[APP-298] which has been prepared in accordance with industry good practice guidance</p>		<p>WSI</p> <p>DCO Schedule 10, Part 2, conditions 13;</p> <p>DCO Schedule 11, Part 2, conditions 13;</p> <p>DCO Schedule 12, Part 2, conditions 12;</p> <p>DCO Schedule 13, Part 2, conditions 12-;</p> <p>DCO Schedule 2, Part, 1, Requirement 18, Onshore Archaeology.</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					on Archaeological WSIs (The Crown Estate, 2021) and accompanies the DCO application.		
Chapter 15 Aviation and Radar							
15.1	15.3.3	Embedded	Layout and regularity	Risk to navigation aviation flight; safety and emergency response	The projects will ensure compliance with MGN 654 Safety of Navigation Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response in addition to CAP 393 Air Navigation Order 2016, CAP 764 CAA Policy and Guidelines on Wind Turbines and CAP 437 Standards for Offshore Helicopter Landing Areas, where applicable.	Minimised risk to navigation aviation flight; safety and emergency response	DCO Schedule 10, Part 2, conditions 10, 13 and 16. DCO Schedule 11, Part 2, conditions 10, 13 and 16. DCO Schedule 12, Part 2, conditions 9; 12 and 15. DCO Schedule 13, Part 2, conditions 9, 12 and 15.
15.2	15.3.3	Embedded	Lighting and marking	Risk to navigation aviation flight safety	Marking and lighting will be deployed in accordance with the latest relevant available standard industry guidance and as advised by CAA, MOD, Trinity House and MCA, as appropriate.	Minimised risk to navigation aviation flight safety	Secured through the DCO/DML Schedule 10, Part 2, conditions 8 and 10; DCO Schedule 11, Part 2, conditions 8 and 10; DCO Schedule 12, Part 2, conditions 7 and 9; DCO Schedule 13, Part 2, conditions 7 and 9.
15.3	15.3.3	Embedded	Notification	Risk to navigation aviation flight safety	The Defence Geographic Centre (DGC) will be informed of the locations, heights and lighting status of the wind turbines, including estimated and actual dates of construction and the maximum height of any construction equipment to be used, prior to the start of construction, to allow inclusion on Aviation Charts. Pilots will be notified of infrastructure and any maintenance activities.	Minimised risk to navigation aviation flight safety	DCO Schedule 10, Part 2, conditions 10; DCO Schedule 11, Part 2, conditions 10; DCO Schedule 12, Part 2, conditions 9; DCO Schedule 13, Part 2, conditions 9.
15.4	15.3.3	Embedded	Weybourne transmitter	Risk to navigation aviation safety and communications	Construction and any permanent above-ground infrastructure to remain below Weybourne safeguarding requirements. Receptors will be notified of construction activity and the maximum height of construction equipment.	Minimised risk to navigation aviation safety and communications	N/A

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
15.5	15.6	Additional	Blanking and airspace change - Claxby and Cromer Primary Surveillance Radars (PSRs)	Risk to navigation , aviation safety and airspace access	The mitigation will require two stages – blanking of the affected radar systems; and an application to the UK regulator (CAA) under an airspace change proposal detailed in CAP 1616 (CAA, 2020) to establish a TMZ. Air space changes will require a post implementation review.	Minimised risk to navigation, safety aviation safety and airspace access	DCO schedule 2, Part 1, Requirement 28, Cromer and Claxby Primary Surveillance Radar .
15.6	15.6	Additional	Norwich Airport PSR	Risk to aviation safety and provision of Air Traffic Services (ATS)navigation, safety	Re-configuration of the Norwich Airport PSR by the radar manufacturer. Consultation with the airport safeguarding team has commenced and will continue to reach agreement on the best mitigation solution to remove the impact created by the projects.-	Minimised risk to aviation safety and provision of Air Traffic Services (ATS)navigation, safety	N/A
15.7	15.6	Additional	Air Traffic Control Surveillance Minimum Altitude Chart (ATCSMAC)	Risk to aviation safety and provision of Air Traffic Services (ATS)navigation and safety	Increase in height of the ATCSMAC minima in the sectors ea affected by the projects. Consultation with the airport and helicopter operators is ongoing for an agreement by the airport to increase the level of the ATCSMAC minima.	Minimised risk to aviation safety and provision of Air Traffic Services (ATS)navigation and safety.	N/A
15.8	15.6	Additional	ATCSMAC	Risk to aviation safety and provision of Air Traffic Services (ATS)navigation and safety	Commercial agreements with operators where necessary. Concern was raised in consultation with the helicopter operators that in order to meet the required obstruction avoidance (2,100 ft for the extension areas), in certain weather conditions, flight in IMC may be required and subject the aircraft to icing conditions, which would be unacceptable. Where significant diversions are required markedly increasing flight times and fuel burn, commercial agreements will be sought where necessary. Assessment is ongoing to quantify the level of impact of diversions in IMC.	Minimised risk to aviation safety and provision of Air Traffic Services (ATS)navigation and safety.	N/A
15.9	15.6	Additional	ATCSMAC	Risk to aviation safety and provision of Air Traffic Services (ATS)navigation and safety,	To allow the continuation of the current level of service an operational amendment of the ATCSMAC dimensions would be favourable (lateral limits of the Surveillance Minimum Altitude Area (SMAA) may be altered and/or sectorised to take account of obstacles and local operational procedures). Further sectorisation of the existing northern ATCSMAC quadrants (segmented to align with the outer limits of SEP and DEP) to minimise impacts, such as increased journey times, to helicopter operations	Minimised risk to aviation safety and provision of Air Traffic Services (ATS)navigation and safety.	N/A
15.10	15.6	Additional	Trimingham Neatishead Air Defence Radar (ADR)	Risk to State security and aviation safety navigation, safety.	-The applicant is in discussion with the MOD in order to reach agreement. Any suggested mitigation solution should provide a volume of airspace above the proposed development which achieves an agreed performance metric when the mitigation is in place; a technical mitigation solution will be agreed with the MOD prior to operation of the proposed development. The	Minimised risk to State security and aviation safety navigation, safety.	DCO schedule 2, Part 1, Requirement 27, Ministry of Defence surveillance operations .

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					MOD, Department for Business, Energy and Industrial Strategy (BEIS), The Crown Estate and the Offshore Wind Industry Council (OWIC) formed a Joint Task Force (JTF) whose aim is to enable co-existence of air defence and offshore wind. During September 2021, the task force published a strategy document entitled Air Defence and Offshore Wind, Working Together Towards Net Zero (JTF, 2021) which sets out the process of the development of future technical radar mitigation schemes to mitigate ADR from the impact created by the radar detectability of operational wind turbines. One or two potential technical radar mitigation solutions have been identified and these systems have demonstrated that they could potentially support wind farm development, the JTF are working towards the procurement of an ADR technical mitigation solution which once deployed will provide an enduring solution.		
Chapter 16 – Petroleum Industry and Other Marine Users							
16.1	16.3.3	Embedded	Stakeholder engagement	Impact to existing stakeholder operations	Owners and operators of infrastructure (including oil and gas operators, other wind farm developers, dredging companies and cable operators) have been and will continue to be, consulted by the Applicant.	Minimise impact to stakeholder operations.	N/A
16.2	16.3.3	Embedded	Promulgation of information	Impact to existing stakeholder operations	Advance warning and accurate location details of construction, maintenance and decommissioning operations, associated safety zones and advisory passing distances will be given via Notices to Mariners and Kingfisher Bulletins and other appropriate media.	Minimise impact to stakeholder operations.	-Secured through the DCO/DML Schedule 10, Part 2, condition 7; DCO Schedule 11, Part 2, condition 7; DCO Schedule 12, Part 2, conditions. 6; DCO Schedule 13, Part 2, conditions 6
16.3	16.3.3	Embedded	Crossing and proximity agreements	Impact to asset owners whose assets will be crossed/ are in close proximity	Crossing and proximity agreements will be agreed post-consent with the relevant asset owners with consideration of OIL AND GAS UK – Pipelines Crossing Agreement and Proximity Agreement Pack (OIL AND GAS UK, 2015).	Minimise impact to assets and asset operations in close proximity	N/A
16.4	16.3.3	Embedded	Cooperation and liaison agreements	Impact to existing stakeholder operations	Cooperation and liaison agreements between SEP and DEP and relevant operators to ensure any access issues are minimised. This should include the sharing of information between parties to ensure both Equinor and the relevant O&G operators are aware of each other's operations in advance.	Minimise impact to stakeholder operations.	DCO Schedule 10, Part 2, condition 7; DCO Schedule 11, Part 2, condition 7; DCO Schedule 12, Part 2, conditions 6;

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
							DCO Schedule 13, Part 2, conditions 6
16.5	16.3.3	Embedded	Marking and lighting	Impact to existing stakeholder operations	Consultation with Trinity House to determine appropriate lighting and marking taking into consideration the existing O&G assets.	Minimise impact to stakeholder operations.	Secured through the DCO/DML Schedule 10, Part 2, conditions 8 and 10; DCO Schedule 11, Part 2, conditions 8 and 10; DCO Schedule 12, Part 2, conditions 7 and 9; DCO Schedule 13, Part 2, conditions 7 and 9.
16.6	16.3.3	Embedded	Unimpeded SAR access	Impact to SAR access	Alignment of turbines as required under Marine Guidance Note (MGN) 654 to provide obstruction free SAR access.	Minimise impacts to SAR	DCO Schedule 10, Part 2, condition 16; DCO Schedule 11, Part 2, condition 16; DCO Schedule 12, Part 2, conditions 15; DCO Schedule 13, Part 2, conditions 15
16.7	16.6	Additional	1.01NM buffer free of surface piercing infrastructure around Waveney and Protective Provisions for 1.26nm	Impact to operations at Waveney	An obstacle free 1.01NM arc around Waveney to ensure approaches and take off under VMC conditions could be conducted safely. Protective Provisions for 1.26nm have been included in the draft DCO for the benefit of Perenco UK, operators of Waveney.	Minimise operational impacts at Waveney.	N/A DCO Schedule 14, Part 14
16.8	16.6	Additional	Turbine positioning	Impact to existing stakeholder operations	Positioning of turbines within the DEP North array area and DEP South array area to minimise any reduction in sea room (to accommodate anchor spreads, for example).	Minimise impact to stakeholder operations.	N/A
16.9	16.6	Additional	Ongoing consultation	Impact to existing stakeholder operations	Ongoing consultation with relevant O&G stakeholders in addition to MCA and Trinity House to ensure appropriate access is maintained and to ensure close liaison and agreement of appropriate protocols during periods of major maintenance.	Minimise impact to stakeholder operations.	DCO Schedule 10, Part 2, conditions 13; DCO Schedule 11, Part 2, conditions 13; DCO Schedule 12, Part 2, conditions 12; DCO Schedule 13, Part 2, conditions 12.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
16.10	16.6	Additional	Utilisation of walk-to-work vessel	Impact to existing stakeholder operations	Utilisation of an alternative means of access, such as a walk-to-work vessel, where appropriate, where helicopter operators may decline to fly to site.	Minimise impact to stakeholder operations.	N/A
16.11	16.6	Additional	Commercial agreements	Impact to existing stakeholder operations	Commercial agreements, where justified, to mitigate delays or impeded access resulting specifically from the presence of SEP and DEP.	Minimise impact to stakeholder operations.	N/A
Chapter 25 Seascape, Landscape and Visual Impact Assessment							
25.1		Embedded	Site selection	Impact to sensitive land-based receptors, and to ensure sufficient gap between SEP and Race Bank OWF.	<p>It was decided not to include the SEP AfL between the southern edge of the existing Sheringham Shoal wind farm and the Norfolk coast due to the proximity of sensitive land-based receptors.</p> <p>In addition, as a result of the embedded mitigation measure concerning red-throated divers and the commitment to "...turbine restriction zones within the southeast and southern west corners of the SEP wind farm site..." to minimise potential disturbance and displacement of this sea bird (see 11.5 above), the final locations of the operational turbines will be further from the coast and the nearest onshore receptors. As a consequence of this commitment, the operational turbines would appear marginally smaller on the horizon (and on the visualisations submitted in support of ES Chapter 25 SVIA).</p>	Minimise impact to land-based receptors and ensure sufficient gap between SEP and Race Bank OWF.	N/A

1.4 Onshore Schedule of Mitigation

Table 2: Onshore Mitigation Measures

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
Chapter 17 Ground Conditions and Contamination							
17.1	17.3.3	Embedded	Horizontal Directional Drilling (HDD)	Impact on surface water quality	Trenchless crossing techniques (e.g. HDD) have been committed to where the cable corridor crosses Main Rivers and some smaller watercourses. This will minimise the potential for contamination (if present) from excavation works by limiting the potential for contaminated material to enter surface waters via surface run off.	Minimise impact of contamination from excavation works	N/A
17.2	17.3.3	Embedded	Site selection	Impacts on groundwater and abstractions for public water supply	The DCO Order Limits has have been developed to avoid interaction with Groundwater Source Protection Zone 1, and therefore minimise the potential for impact on abstractions for public water supply.	Minimise impact on abstractions for public water supply	N/A
17.3	17.3.3	Embedded	Pollution control measures	Impacts on groundwater quality	The use of an oil water sump within the onshore substation to reduce the potential for leaks and spills impacting groundwater quality.	Minimise impact of pollution	N/A
17.4	17.6.1.1.5	Additional	Ground investigations	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	<p>Where areas of potential contamination cannot be avoided, such as the areas that cross the entire width of the onshore cable corridor (e.g. the disused airfield at Brandiston and railways lines (both historical and active)), targeted ground investigations may be required.</p> <p>This would characterise the site conditions, identify unacceptable risks and determine whether remediation is required. If areas of potential concern are identified, then a remediation strategy would be developed and agreed with the relevant bodies prior to the commencement of remedial works and construction activity.</p> <p>The ground investigation, risk assessment and remediation would follow guidance provided within the 2021 Environment Agency Land Contamination Risk Management Framework.</p>	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.5	17.6.1.1.5	Additional	Ground contamination	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	<p>The Code of Construction practice (CoCP) will be informed by the findings of pre-construction site investigation and include an assessment of the potential risks to human health and controlled waters receptors from SEP and / or DEP. Based on that risk assessment appropriate working methods would be developed to avoid, minimise or mitigate impacts relating to construction.</p> <p>The risk mitigation strategies incorporated into the CoCP would also include appropriate Personal Protective Equipment</p>	Minimise impact to human health from exposure to contaminated soils and ground water	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					(PPE), provision of welfare facilities, monitoring of works including air quality and odour and implementation of relevant good working practices applied including stockpile management and dust suppression activities to reduce the risk relating to the creation and inhalation of wind-blown dusts.		
17.6	17.6.1.1.5	Additional	Ground contamination and human health	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	The CoCP would incorporate legislation requirements including the Construction Design Management (CDM) Regulations (2015), Health and Safety at Work Act (1974), CoCP and Control of Substances Hazardous to Health (COSHH) Regulations.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement,19, Code of Construction Practice (CoCP)
17.7	17.6.1.1.5	Additional	Pollution prevention	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	The CoCP would incorporate the Environment Agency best practice guidelines for pollution prevention which have been withdrawn from use but still provide a useful best practice guide and include: <ul style="list-style-type: none"> • Environment Agency Pollution Prevention Guidance (PPG) 01 – Understanding your environmental responsibilities; • Environment Agency PPG 05 – Works and maintenance near water; • Environment Agency PPG 06 – Working at construction and demolition sites: preventing pollution guidance; • Environment Agency PPG 08 – Safe storage and disposal of used oils, and • Environment Agency PPG 21 – Pollution incident response planning. 	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.8	17.6.1.1.5	Additional	Excavated soils	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Adoption of a CL:AIRE Industry Code of Practice to manage the re-use and disposal of excavated soils on site would also be incorporated as an additional mitigation measure to protect human health, this would aid in maximising sustainability and providing an audit trail to demonstrate the appropriate use of materials.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.9	17.6.1.1.5	Additional	Excavated soils	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater	A Materials Management Plan (MMP) would be drafted in advance of any construction works, this would include chemical screening criteria in order to ensure that imported and/or reused materials are chemically suitable for use. If materials identified as containing asbestos are identified, then a specialist contractor should be employed to aid in its removal from site, in line with current legislation.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
				and associated health impacts			
17.10	17.6.1.1.5	Additional	Excavated soils	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	The CoCP and MMP would be submitted for approval with the relevant statutory bodies in advance of implementation.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.11	17.6.1.1.5	Additional	Ground Gas and Vapours	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Risks associated with the creation of a preferential pathway for ground gas and vapours via the onshore cable corridor can be mitigated via re-instating excavated materials following the installation of the onshore cables, however if this is to change or a significant source of gas / vapour generating material is encountered during construction further consideration will be required.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.12	17.6.1.1.5	Additional	Ground Gas and Vapours	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Risks to construction workers in relation to ground gas and vapours would be mitigated by the use of appropriate working methods incorporated in the CoCP and use of PPE.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.13	17.6.1.2.5	Additional	Pollution prevention	Direct impacts on groundwater quality and groundwater resources	<p>A CoCP will be developed which would include specific measures relevant to the storage of fuels, oils, lubricants, waste water and other chemicals during the works. This will include:</p> <ul style="list-style-type: none"> Storing all fuels, oils, lubricants, wastewater and other chemicals in impermeable bunds with at least 10% of the stored capacity, with any damaged containers being removed from site. Refuelling would take place in a dedicated impermeable area, using a bunder bowser. Biodegradable oils to be used where possible. Ensuring that spill kits are available on site at all times as well as sand bags and stop logs for deployment in case of emergency spillages. 	Minimise impact to ground water quality and resources through the appropriate storage of fuels, oils, lubricants, waste water and other chemicals during the works	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
17.14	17.6.1.2.5	Additional	Hydrogeological risk assessment	Direct impacts on groundwater quality and groundwater resources	A hydrogeological risk assessment where earthworks/ excavations are within 50m (or 250m dependent upon volume abstracted) of private potable groundwater abstractions. The risk assessment would meet the requirements of Environment Agency's Approach to Groundwater Protection 2018 Framework.	Minimise impact to ground water quality and resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.15	17.6.1.2.5	Additional	Piling	Direct impacts on groundwater quality and groundwater resources	A piling risk assessment would be undertaken if piles are to be used in areas of potential contamination, in line with the Environment Agency's Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (Environment Agency, 2001).	Minimise impact to ground water quality and resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.16	17.6.1.3.4	Additional	Dewatering activities	Impacts on surface water quality and the ecological habitats they support from contamination	In areas that have been identified as potential areas of contamination within the Preliminary Risk Assessment (PRA) or encountered during construction works, perched waters within Made Ground or groundwater from dewatering activities would be collected within a tank or lagoon prior to any treatment or discharge. This waste water shall either be: <ul style="list-style-type: none"> Discharged to foul sewer under a trade effluent consent agreed with the local water company/supplier; and/or Discharged to surface water under an environmental permit issued from the Environment Agency. 	Minimise impact surface water and ecological habitats	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.17	17.6.1.3.4	Additional	Dewatering activities	Impacts on surface water quality and the ecological habitats they support from contamination	On site treatment plant may be required to treat the waste water prior to disposal in order to meet discharge limits set by either the Environment Agency or local water company.	Minimise impact surface water and ecological habitats	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.18	17.6.1.4.5	Additional	Mineral Sterilisation	Sterilisation of future mineral resources	Mitigation would include consultation with the Norfolk County Council (NCC) Mineral Planning Authority with regards to the feasibility of mineral extraction prior to development. This would be supported by ground investigations prior to construction to help better determine the depth, accessibility and quality of the mineral resource and enable a quantification of the amount of the mineral that may be sterilised. A Mineral Resource Assessment would be undertaken if required, to provide an indication of the likely quality and extent of the mineral resource, the commercial viability of extraction and environmental impact.	Minimise impacts to future mineral resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.19	17.6.4.5.5	Additional	Commercial, residential properties and the school	Built Environment	Mitigation includes the reduction of construction activities in proximity to commercial, residential properties and the school where possible. However, where this isn't possible pre-construction site characterisation works in areas identified as potential sources of contamination may be required.	Minimise impacts to the built environment	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
17.20	17.6.2.1.4	Additional	Contamination	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Remedial works would be undertaken if areas of contamination are identified during the site characterisation works prior to construction and if unexpected contamination is identified during construction. This would mean that contaminated soils would not be permanently left at surface during the operational phases of SEP and DEP. The remedial works would be undertaken prior to the operation of SEP and/or DEP would reduce the potential for impact to human health.	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 9, Code of Construction Practice (CoCP)
17.21	17.6.2.1.4	Additional	Contamination	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Re-instating the materials excavation during the installation of the onshore cable corridor the potential impact to human health would be reduced.	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.22	17.6.2.1.4	Additional	Contamination	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Maintenance workers that are required to undertake ground excavations during the operation of SEP and DEP will be provided with information regarding the nature of ground conditions within each area so that they can develop site and task specific risk assessment and method statements and implement their recommendations.	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.23	17.6.2.2.4	Additional	Contamination	Impact on controlled waters (groundwater and surface waters)	Maintenance workers that are required to undertake ground excavations or maintenance works during the operation of SEP and DEP would be provided with information regarding the nature of ground conditions within each area so that they can develop site and task specific risk assessment and method statements and implement their recommendations to protect controlled waters.	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.24	17.6.2.2.4	Additional	Contamination	Impact on controlled waters (groundwater and surface waters)	During cable repair / maintenance works and at the onshore substation, all fuels, oils lubricants and other chemicals would be stored in an impermeable bund with at least 110% of stored capacity. Spill kits would be available on site at all times and an Emergency Response Plan (ERP) (or similar) would be developed which outlines mitigation measures to be undertaken in the event of an uncontrolled release of hazardous materials.	Minimise impacts to controlled waters	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.25	17.6.2.3.5	Additional	Future Mineral Resource	Sterilisation of future mineral resources	Consultation with NCC Mineral Planning Authority will be undertaken to determine the feasibility of mineral extraction within the area that would be sterilised. It may be necessary for a minerals resource assessment to be undertaken to determine the amount of mineral at risk from sterilisation and	Minimise impacts to future minerals resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					the viability of extraction. Where viable, consideration will be given to the extraction of the mineral resource during construction		
17.26	17.6.2.4.3	Additional	Ground gases	Built environment	Should unexpected sources of ground gas be identified prior to or during construction works, a ground investigation will be undertaken to characterise ground conditions and assessment of potential risks. Depending on the outcome of the assessment, mitigation measures such as the use of gas protection measures within the substation design will be implemented.	Minimise risk to the built environment	DCO Schedule 2, Part 1, Requirement 19, Contaminated Land and Groundwater Scheme
17.27	17.6.2.4.3	Additional	Contamination	Built environment	If utilities corridors are within land affected by contamination, construction of clean or lined service corridors will be installed to protect land users and utilities.	Minimise risk to the built environment	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.28	17.6.2.4.3	Additional	Contamination	Built environment	In line with the British Research Establishment (BRE) Special Digest 1, materials suitable for the identified ground conditions would be used to ensure that the correct concrete type for the environment has been selected.	Minimise risk to the built environment	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.29	17.11	Additional	Monitoring	Human health, groundwater and surface water receptors	Groundwater and ground gas monitoring may be required as part of any targeted ground investigations that may be required in order to determine the site characteristics and if they pose a potential risk to human health, groundwater and surface water receptors.	Minimise risk to human health, groundwater and surface water receptors	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.30	Chapter 17 - Ground Conditions and Contamination - Appendix 17.2 - Waste Assessment	Additional	Waste materials	Impacts to human health, groundwater, and surface water receptors	A Site Waste Management Plan (SWMP) will be prepared to record any decisions given to materials resource efficiency when designing and planning the works. Any assumptions on the nature of the project; its design; the construction method or materials employed, in order to minimise the quantity of waste produced on site; or maximise the amount of waste reused, recycled or recovered, will be captured within the SWMP.	Ensure that waste materials are handled and reused/disposed of appropriately	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.31	Deadline 4 Submission - 9.17 Outline Code of Construction Practice (Revision D)	Additional	Contamination	Impact on controlled waters (groundwater and surface waters)	There is a very small area where construction access for the substation site overlaps with SPZ 2. This small overlap covers an area of the proposed onshore substation temporary construction access road where it leaves the A140 Ipswich Road (illustrated on ES Figure 18.4 Groundwater Receptors, Sheet 6 of 6 [APP-219]). Works here will be limited to a maximum depth of 600mm below the ground surface.	Minimise impacts to controlled waters	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
17.32	Deadline 3 Submission - 3.1.1 Draft Development Consent Order (Revision F)	Additional	Remediation	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Pre-commencement remedial work in respect of any ground contamination or other adverse ground conditions will be undertaken in accordance with a scheme to deal with the contamination of any land (including groundwater) that is likely to cause significant harm to persons or pollution of controlled waters or the environment which has been submitted to, and approved by, the relevant planning authority in consultation with the Environment Agency.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 32, Contaminated land and groundwater scheme

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>Each scheme will include an investigation and assessment report, prepared by a specialist consultant to identify the extent of any contamination and the remedial measures to be taken for that stage to render the land fit for its intended purpose, together with a management plan which sets out long-term measures with respect to any contaminants remaining on the site.</p> <p>Such remediation as may be identified in each approved scheme must be carried out in accordance with that approved scheme.</p>		
Chapter 18 Water Resources and Flood Risk							
18.1	18.3.3	Embedded	Water Crossings	Impact on watercourses	All Main Rivers will be crossed using trenchless techniques such as HDD to avoid direct interaction with these watercourses. The cable entry and exit pits will be at least 9m from the banks of the watercourse, and the cable will be at least 2m below the channel bed.	Avoid any impacts arising from trenching on watercourses	N/A
18.2	18.3.3	Embedded	Groundwater Quality	Impact on abstractions for public water supply	The cable corridor has been developed to avoid interaction with Groundwater Source Protection Zone 1, and therefore minimise the potential for impact on abstractions for public water supply.	Minimise potential impact groundwater quality	N/A
18.3	18.6.1.1.5	Additional	Trenched crossings	Direct Disturbance of Surface Water Bodies	Where temporary dams are required during the trenched crossing process the amount of time that these are in place will be kept to a minimum. Prior to dewatering the area between the temporary dams, a fish rescue would be undertaken. Flumes or pumps would be adequately sized to ensure that flows downstream are maintained whilst minimising upstream impoundment. Scour protection would also be used to protect the river bed downstream of the dam from high energy flow at the outlets of flumes and pumps.	Minimise potential impacts on watercourses from temporary crossings	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.4	18.6.1.1.5	Additional	Cable ducts	Direct Disturbance of Surface Water Bodies	The cable ducts would typically be installed two metres below the bed of the water body (dependent on local geology and geomorphological risks) to avoid exposure during periods of higher energy flow when the bed could be mobilised. This depth takes into consideration anticipated climate-change related changes in fluvial flows and erosion that will occur over time.	Minimise potential impacts on the riverbed from exposure	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.5	18.6.1.1.5	Additional	Cable ducts	Direct Disturbance of Surface Water Bodies	In some sensitive locations where a culvert or temporary bridge would not be appropriate to maintain access over watercourses, the haul road would effectively stop and would re-start on the opposite side of the river. Access to the opposite side of the river would need to be taken from the existing road network.	Minimise potential impacts on the riverbed from exposure	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
18.6	18.6.1.1.5	Additional	Cable ducts	Direct Disturbance of Surface Water Bodies	Any culverts installed to maintain access across watercourses would be adequately sized to avoid impounding flows (including an allowance for potential increases in winter flows as a result of projected climate change). Culverts would be installed installed below the active bed of the channel, so that sediment continuity and movement of fish and aquatic invertebrates can be maintained.	Minimise potential impacts on the riverbed from exposure	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.7	18.6.1.2.5	Additional	Trench excavations	Increased Sediment Supply	Limiting extent of open excavations along the onshore cable corridor to short sections at any one time (work fronts). Topsoil would be stripped from the entire width of the onshore cable corridor for the length of the work front, then stored and capped to minimise erosion from wind and rain.	Minimise sediment deposition into water bodies from erosion	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.8	18.6.1.2.5	Additional	Trench excavations	Increased Sediment Supply	Temporary works areas (e.g. construction compounds and trenchless crossing areas) within the onshore development area may comprise hardstanding of permeable material, such as gravel aggregate or alternatively matting/timber or similar, underlain by geotextile or another suitable material to a minimum of 50% of the exposed area. This would minimise the area of open ground.	Minimise sediment deposition into water bodies from erosion	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.9	18.6.1.2.5	Additional	Trench excavations	Increased Sediment Supply	<p>Construction activities will adhere to industry good practice measures as detailed in the Environment Agency's Pollution Prevention Guidance (PPG) notes (including PPG1, PPG5, PPG8 and PPG21) (although these have been revoked, they provide a useful guide for best practice measures) and Construction Industry Research and Information Association (CIRIA)'s 'Control of water pollution from construction sites: Guidance for consultants and contractors (C532)' (2001). Specific measures within the CMS will include:</p> <ul style="list-style-type: none"> • Minimising of subsoil exposure and retention of strips of undisturbed vegetation on the edge of the working area where possible; • On-site retention of sediment to be maximised by routing all drainage through the site drainage system; • Including measures to intercept sediment runoff at source in the drainage system using suitable filters to remove sediment from water discharged to the surface drainage network; • Cleaning of the wheels of vehicles leaving site to prevent the accumulation of soil and sediment on road surfaces. Traffic movements would be restricted to minimise surface disturbance; and • Routing the cable to avoid water resources and flood risk receptors where possible. 	Minimise sediment deposition into water bodies from erosion	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> In locations where large areas of exposed ground lie adjacent to watercourses, buffer strips of vegetation will be retained where possible to prevent runoff. 		
18.10	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Situating concrete and cement mixing and washing areas at least 10m away from the nearest water body. These areas will incorporate settlement and recirculation systems to allow water to be re-used. All washing out of equipment would take place in a contained area and the water collected for disposal off-site.	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.11	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Storing all fuels, oils, lubricants and other chemicals in impermeable bunds with at least 110% of the stored capacity, with any damaged containers being removed from site. Refueling Refuelling would take place in a dedicated impermeable area, using a bunded bowser, located at least 10m away from the nearest water body.	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.12	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Ensuring that spill kits are available on site at all times as well as sand bags and stop logs for deployment on the outlets from the site drainage system in case of emergency spillages.	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.13	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Foul drainage (e.g. from construction welfare facilities) will be collected through mains connection to an existing mains sewer (if such a connection is available) or collected in a septic tank located within the DCO order limits and transported off site for disposal at a licensed facility with appropriate treatment capacity within its existing permit.	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.14	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	During construction, the onshore cable installation will be designed with drainage channels to intercept drainage within the working width. Additional drainage channels will be installed to intercept water from the cable trench. This will be discharged at a controlled rate into local ditches or drains via temporary interceptor drains. Depending upon the precise location, water from the channels will be infiltrated or discharged into the existing drainage network	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.15	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Construction drainage will be developed and implemented to minimise water within the cable trench and ensure ongoing drainage of surrounding land. If water enters the trenches during installation from surface runoff of groundwater seepage, this will be pumped via settling tanks, sediment basins, sediment filtration socks or mobile treatment facilities to remove sediment, before being discharged into local ditches or drains via temporary interceptor drains. Existing land drains will be reinstated following construction	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.16	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Buffer strips of vegetation will be retained adjacent to water bodies where possible, to intercept any contaminated runoff. To protect groundwater bodies, excavation will be shallow, limited to approximately 1.6m below the surface, except where	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					it passes below road and rail infrastructure or water bodies where it may be deeper.		
18.17	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	Changes in surface water runoff resulting from the increase in impermeable area from the construction of the onshore cable corridor and particularly the onshore substation would be attenuated and discharged at a controlled rate, in consultation with the Lead Local Flood Authority (LLFA) and the Environment Agency, and potentially Anglian Water if a connection to their drainage infrastructure is required during construction of the onshore substation. This controlled runoff rate would be equivalent to the greenfield runoff rate.	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.18	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	During construction, the onshore cable installation would be designed with drainage channels to intercept drainage within the working width. Additional drainage channels would be installed to intercept water from the cable trench. This would be discharged at a controlled rate into local ditches or drains via temporary interceptor drains. Depending upon the precise location, water from the channels would be infiltrated or discharged into the existing drainage network.	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.19	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	Construction drainage would be developed and implemented to minimise water within the cable trench and ensure ongoing drainage of surrounding land. If water enters the trenches during installation from surface runoff of groundwater seepage, this would be pumped via settling tanks, sediment basins, sediment filtration socks or mobile treatment facilities to remove sediment, before being discharged into local ditches or drains via temporary interceptor drains. Existing land drains would be reinstated following construction.	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.20	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	Along the cable corridor, temporary culverts will be adequately sized to avoid impounding flows (including allowing for increased winter flows as a result of climate change).	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.21	18.6.2.1.5	Additional	Drainage	Supply of Contaminants to Surface and Groundwater	Operational drainage at the onshore substation would be developed according to the principles of the Sustainable Drainage System (SuDS) discharge hierarchy. Generally, the aim will be to discharge surface water runoff as high up the following hierarchy of drainage options as reasonably practicable: i) into the ground (infiltration); ii) to a surface water body; iii) to a surface water sewer, highway drain or another drainage system; or iv) to a combined sewer. This will include attenuation and hydrocarbon interceptors to prevent the supply of contaminants (including oils and fine sediment).	Minimise water contamination arising from operation	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.22	18.6.2.1.5	Additional	Foul Water	Supply of Contaminants to	Foul waters from welfare facilities will either be discharged through a mains connection to an existing mains sewer (if such a connection is available) or collected in a septic tank located	Minimise water contamination arising from foul water	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
				Surface and Groundwater	within the DCO order limits and transported off site for disposal at a licensed facility with appropriate treatment capacity within its existing permit.		
18.23	18.6.2.1.5	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwater	All fuels, oils, lubricants and other chemicals used at the onshore substation would be stored in an impermeable bund with at least 110% of the stored capacity. Damaged containers will be removed from site and all refuelling would take place in a dedicated impermeable area, using a bunded bowser. Biodegradable oils will be used where possible.	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.24	18.6.2.1.5	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwater	Spill kits would be available on site at all times. Sand bags or stop logs will also be available for deployment on the outlets from the site drainage system in case of emergency.	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.25	18.6.2.2.5	Additional	Drainage	Changes to Surface and Groundwater Flows and Flood Risk	Surface water drainage at the onshore substation would be designed to meet the requirements of the National Planning Policy Framework (NPPF) and National Policy Statement (NPS) EN-5, with runoff limited, where feasible, through the use of infiltration techniques which can be accommodated within the DCO order limits. The drainage will be developed according to the principles of the SuDS discharge hierarchy. Generally, the aim will be to discharge surface water runoff as high up the following hierarchy of drainage options as reasonably practicable: i) into the ground (infiltration); ii) to a surface water body; iii) to a surface water sewer, highway drain or another drainage system; or iv) to a combined sewer. This will include attenuation and hydrocarbon interceptors to prevent the supply of contaminants (including oils and fine sediment). No mitigation is proposed specifically along the onshore cable corridor.	Minimise potential impacts on water flows and prevent flood risk	DCO Schedule 2, Part 1, Requirement 11 and 12, Outline Landscape Management Plan (OLMP)
18.26	9.17 Outline Code of Construction Practice	Additional	Flood Risk	Changes to Surface and Groundwater Flows and Flood Risk	Specific flood warning and evacuation plans should be produced for the construction phase of the onshore cable corridor, specifically related to construction works at watercourse crossing locations where personnel or materials may be located, albeit temporarily, within Flood Zones 2 and 3.	Minimise potential impacts on site personnel and users from flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.27 6	Deadline 2 Submission - 14.4 The Applicant's Comments on Responses to the Examining Authority's First Written Questions	Additional	Water Crossings	Impact on watercourses	The Applicant has committed to securing approval for all Main River watercourse crossings prior to commencement of construction.	Avoid any impacts arising from trenching on watercourses	DCO Schedule 14, Parts 4 (For the protection of the Environment Agency) and 5 (For the protection of the drainage authorities) DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
18.28	Deadline 5 submission – 9.17 Outline Code of Construction Practice (Revision E)	Embedded	Water Crossings	Impact on watercourses	<p>The Applicant has committed to develop a scheme and programme for each watercourse crossing, diversion and reinstatement, which will include site-specific details regarding sediment management and pollution prevention measures. The Watercourse Crossing Scheme will be submitted, as part of the CoCP, to the relevant planning authority.</p> <p>A full walkover of the onshore cable corridor will be carried out to identify all ordinary watercourses which will help to confirm the number, location and design of watercourse crossings. This will be undertaken during detailed design stage in support of the Watercourse Crossing Scheme and to inform any applications that seek Lead Local Flood Authority (LLFA) or Internal Drainage Board (IDB) approval for the crossing of ordinary watercourses.</p>	Avoid any impacts arising from trenching on watercourses	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
18.29	Deadline 7 Submission - 3.1.1 Draft Development Consent Order (Revision J) (Tracked Revisions I/J)	Additional	Drainage	Impacts to drainage networks	Maintain in good repair and condition and free from obstruction any drainage work which is situated within the Order limits and on land held by the undertaker for the purposes of or in connection with the specified work, whether or not the drainage work is constructed under the powers conferred by this Order or is already in existence.	Minimise impacts on drainage networks	DCO Schedule 14, Part 5 (For the protection of the drainage authorities) Requirement 7
Chapter 19 Land Use, Agriculture and Recreation							
19.1	19.3.3	Embedded	Site Selection	Impact on residential properties, historic and nature designations and infrastructure	<p>SEP and DEP have undergone an extensive site selection process which has involved incorporating environmental considerations (avoiding residential properties, historic and nature designations and infrastructure e.g. buried cables, railways, roads,) in collaboration with the engineering design requirements.</p> <p>Land take has been minimised where possible, reducing sterile land parcels, aligning with field boundaries and avoiding the best and most versatile land.</p>	Minimise impact on existing infrastructure	N/A
19.2	19.3.3	Embedded	Long HDD at Landfall	Impact on Weybourne beach	The Applicant has committed to installing the cables at landfall using HDD, thereby avoiding physical disturbance or prolonged access restrictions to Weybourne beach.	Minimise impact on Weybourne beach	N/A
19.3	19.3.3	Embedded	Haul road	Impact on areas from physical disturbance	The Applicant has included to a haul road to deliver equipment to the installation site from construction compounds. This will limit physical disturbance to a specific area. Following an initial topsoil strip, the haul road would be installed in stages as each work front progresses. It would be formed of protective matting, temporary metalled road or permeable gravel aggregate dependent on the ground conditions, vehicle requirements and any necessary protection for underground services.	Minimise physical disturbance on areas	N/A

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
19.4	19.3.3	Embedded	Construction Corridor	Impact on soils and drainage	As well as a working easement, the construction corridor will have sufficient space allowed to ensure appropriate soil management and pre-construction drainage.	Minimise impact on soil or drainage from construction	N/A
19.5	19.7.1.1.5	Additional	Field drainage	Agricultural Drainage	Agricultural Liaison Officer (ALO) and land drainage consultant will be appointed to develop pre-and post-construction drainage plans.	Minimise impact on existing field drainage	DCO Schedule 2, Part 1, Requirement 1-9, Code of Construction Practice (CoCP)
19.6	19.7.1.1.5	Additional	Field drainage	Impact on Agricultural Drainage	Pre-construction drainage will be installed to manage water coming from existing underground land drainage pipes which will be affected by the installation of the new cables. Following installation of the cables, the post construction drainage program will commence to ensure that soils affected by the cable corridor are left in a condition that enables a return within the affected fields to full agricultural production. Where necessary post construction drains may be installed, typically parallel to the cable corridor.	Minimise impact on existing field drainage	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.7	19.7.1.1.5	Additional	Field drainage	Impact on natural and artificial field drainage systems	Agricultural drainage systems elsewhere within the study area would be maintained during construction. Minor watercourses/ditches located within the study area would be subject to temporary damming and diversion during the construction phase to mitigate potential impacts. Installation of ducts 2m below the channel bed would be undertaken as part of the diversion process.	Minimise impact on existing field drainage	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.8	19.7.1.2.5	Additional	Agricultural activities	Impact on agricultural land through temporary loss	An Agricultural Liaison Officer (ALO) will be appointed to assist with the appropriate planning and timings of works to minimise disruption to agricultural activities.	Minimise the amount of isolated agricultural land	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.9	19.7.1.2.5	Additional	Agricultural activities	Impact on agricultural productivity through heavy machinery	Private agreements (or compensation in line with the compulsory purchase compensation code) will be sought with relevant landowners/occupiers and the land will be reinstated to preconstruction condition.	Minimise the impact on agricultural productivity	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.10	19.7.1.3.5	Additional	Soil management	Impact on soil quality through erosion and contamination	Measures set out in the Ministry of Agriculture, Fisheries and Food (MAFF) (2000) Good Practice Guide for Handling Soils and Defra (2009) Construction code of practice for the Sustainable Use of Soils on Construction Sites would be adopted. Additionally, guidance from the IES (2020) Sustainable, healthy, and resilient: Practice-based approaches to land and soil management would be used. Producing a Soil Management Plan (SMP) outlining the mitigation measures and best practise techniques, which contractors would be obliged to comply with. Measures would include: <ul style="list-style-type: none"> • Consideration of weather conditions where it is appropriate to work for each soil type e.g. not working in an area of poorly draining soils following a period of heavy rain; • Storing soil appropriately; 	Minimise the impact on soil quality through effective management	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> Ensuring effective drainage systems are used during construction; and Employing reinstatement and plant vegetation following completion of the construction works. 		
19.11	19.7.1.3.5	Additional	Soil management	Impact on soil quality through erosion and contamination	<p>The SMP will set out procedures for the appropriate handling of soils during the works, including:</p> <ul style="list-style-type: none"> Using a competent contractor for soil handling, storage and reinstatement under Defra (2009) Construction code of practice for the Sustainable Use of Soils on Construction Sites; Storing topsoil adjacent to where it is stripped, wherever practicable; Storing excavated subsoil separately from the topsoil, with sufficient separation to ensure segregation; Restricting movements of heavy plant and vehicles to specified routes; and Minimising the footprint of excavation works as much as reasonably possible. Mitigation measures that will limit and/or prevent loss of soil to erosion would be included within the SMP. 	Minimise the impact on soil quality through effective management	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.12	19.7.1.4	Additional	Agri-environment schemes	Impact on land managers' income via Agri-environment schemes	The primary mitigation relating to Agri-environment schemes would be the avoidance of land parcels that are subject to agreements. This, however, has not been possible in some areas of the study area (e.g. area of the onshore substation). Where impacts to an agreement cannot be avoided, the affected landowners and /or occupier will be consulted to enable them to liaise with the Rural Payments Agency. This will include compensation provisions to reimburse a landowner and/or occupiers financial losses, where appropriate.	Minimise the losses associated with a deterioration of land management due to construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.13	19.7.1.4	Additional	Recreational assets	Disruption to onshore coastal recreational assets	Any areas subject to short-term restricted access would be agreed in advance with the Countryside Access Officer at Norfolk County Council prior to construction.	Minimises impacts to recreational assets	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.14	19.7.1.8.4	Additional	Disruption to users of inland recreational assets	Impact on recreational inland users during construction	Appropriate mitigation related to air quality, noise, traffic and visual impacts has been identified in Chapter 223 Air Quality [APP108] , Chapter 24-23 Noise and Vibration [APP-109] , Chapter 245 Traffic and Transport [APP-110] , Chapter 25 Seascapes and Landscape Visual Impact [APP-111] and Chapter 267 Landscape and Visual Impact [APP-112] , to reduce potential impacts down to non-significant. These measures are secured within the OCoCP (Revision G) (document reference 9.17), outline Construction Traffic Management Plan (Revision E) [REP5-029] (document reference 9.16) and Outline Landscape Management Plan (Revision D) [REP5-031] (document reference 9.18) and Outline Ecological Management Plan (Revision E)	Minimise the impacts on inland recreational users by CoCP adherence	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					(document reference 9.19) submitted with the DCO application.		
19.15	19.7.1.9.5	Additional	Public Rights of Way (PRoW)	Impact on any PRoW across the planned work area	<p>Disruption to any recreational routes would be managed to ensure continued safe access for members of the public, and all efforts would be made to minimise any closure durations. The exact management method would be agreed in advance with the relevant local authority for that stage of the works. Methods available include:</p> <ul style="list-style-type: none"> • Appropriately fenced (unmanned) crossing points; • Manned crossing points; and • Temporary alternative routes (assumed be required for approximately 1 week). 	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.15	19.7.1.9.5	Additional	PRoW	Impact on any PRoW across the planned work area	Soft management techniques would be employed where cycle routes intersect the onshore cable corridor. These methods would include (but not be limited to) the use of pilot vehicles and stop and go signs.	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.15	19.7.1.9.5	Additional	PRoW	Impact on any PRoW across the planned work area	Safety measures would be implemented where the haul road crosses a footpath or cycle way, including raising awareness of the footpath or cycle way to construction workers and informing footpath and cycleway users of the hazards associated with the haul road. Where a recreational route is used as part of a construction access, an alternative route for the PRoW would be provided.	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
19.17	19.7.1.9.5	Additional	PRoW	Impact on any PRoW across the planned work area	<p>After the completion of construction works, all recreational routes would be reinstated to their original condition or otherwise as agreed with the relevant local authority.</p> <p>For all temporary alternative routes required, the following measures will be followed:</p> <ul style="list-style-type: none"> • A pre- and post-construction survey (including identification of surface condition and street furniture) of the route affected will be undertaken. Surveys will be undertaken by an experienced surveyor with scope of coverage and methodology to be agreed with the relevant local authority. • A qualified ALO will be employed to ensure that information on existing land conditions is obtained, recorded and verified during these surveys; • Where impacted by the works, the surveyed recreational route would be restored to its original condition or otherwise as agreed with the relevant local authority; • All alternative routes would be advertised following the local authority's standards for advertising temporary closures of route. 	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
19.18	19.7.2.2.5	Additional	Agricultural lands	Loss of agricultural land	Private agreements would be sought between the Applicant and relevant landowners / occupiers regarding any permanent loss of land incurred as a direct consequence of the operation of SEP and DEP.	Private agreements with landholders.	NA
19.19	Deadline 3 Submission - 9.17.1 Outline Code of Construction Practice	Additional	Agricultural land	Soil heating	Thermal analyses will be carried out during detailed design that will model the impact of the cables on soil heating. Final cable design and burial cross section design will ensure compliance with all applicable standards with respect to soil heating.	Minimising soil heating impacts	DCO Schedule 2, Part 1, Requirement 19, Outline Code of Construction Practice
19.21	Deadline 2 Submission - 14.3 The Applicant's Comments on the Local Impact Reports	Additional	County Wildlife Sites	Impact on any CWS across the planned work area	The Applicant has committed to completing an updated desk study including data search with the Norfolk Biodiversity Information Service (NBIS) to obtain up-to-date information on any CWSs within the Order Limits and surrounding 2km area.	Minimise any impacts on CWS	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
19.22	Deadline 7 Submission - 21.5 The Applicant's Responses to the Examining Authority's Fourth Written Questions	Additional	Landowners/occupiers	Impact to landowners/occupiers during the proposed works	The Construction Practice Addendum will form part of legally binding landowner agreements with the final wording included within the final Code of Construction Practice.	Reduce uncertainty of landowners/occupiers	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
Chapter 20 Onshore Ecology and Ornithology							
20.1	20.3.3	Embedded	Designated nature conservation sites	Impact on designated nature conservation sites	SEP and DEP has undergone an extensive site selection process which has involved incorporating environmental considerations in collaboration with the engineering design requirements. The onshore cable corridor has been routed to avoid designated nature conservation sites (e.g. Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) etc.) where possible. Trenchless installation methods for the export cables have been proposed to avoid direct impacts to any designated sites that currently fall within the DCO order limits.-	Avoid any overlap with designated nature conservation sites	N/A
20.2	20.3.3	Embedded	Woodland	Impact on woodland / hedgerow plants and biodiversity	Where the onshore cable corridor crosses through woodland and hedgerows, the working corridor width would be reduced to a typical working width of 20m. This is on the basis that a large part of the 45m (for a single Project) or 60m (for both Projects) corridor is for soil storage/management, and trees and hedgerows would not be removed for this purpose, and would be retained outside the 20m working corridor. The reduced 20m working width at woodland and hedgerow crossing applies to all scenarios; in reality, it is likely to be less	Minimise any loss of biodiversity and environmental conditions in woodland from the cable corridor	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP) DCO Schedule 2, Part 1, Requirement 11 and 12, Outline

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>for a single Project but not for the purposes of the assessment. Hedgerows would be replanted. Trees and woodland would be replanted within the construction corridor but outside the final cable easement of 20m width if both SEP and DEP are constructed and 12m if only SEP or DEP is constructed, where tree planting would be prohibited. Planting would be implemented during the first planting season following completion of construction of either SEP or DEP (subject to landowner agreements), whether constructed concurrently or sequentially. Further details on hedgerow and tree removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031] (document reference 9.18).</p> <p>The DCO order limits have been routed to avoid woodland habitat wherever possible, as demonstrated by the DCO order limit alignment around woodlands such as Mossymere Wood (in the Civil Parishes of Itteringham and Corpusty and Saxthorpe), Colton Wood (in the Civil Parish of Marlingford and Colton) and Smeeth Wood (in the Civil Parish of Ketteringham). Colton Wood and Smeeth Wood are the only Ancient Woodlands in close proximity to the DCO order limits.</p> <p>Minimising habitat loss by narrowing the working corridor as much as is practicable where the DCO order limit passes through hedgerows.</p>		Landscape Management Plan (OLMP)
20.3	20.3.3	Embedded	Cable crossings over watercourses	Impact on existing watercourses	All Main Rivers and IDB maintained Ordinary Watercourses will be crossed using trenchless techniques such as HDD to avoid direct interaction with these watercourses. The cable entry and exit pits will be at least 9m from the banks of the watercourse, and the cable will be at least 2m below the channel bed.	Minimise any impacts on existing watercourses from construction	N/A
20.4	20.6.1.1.3	Additional	Statutory designated nature conservation sites	Impact on statutory designated nature sites	<p>In relation to the risk of drilling fluid breakout, SEP and DEP have committed to a minimum depth of 2m below the bed level of watercourses at trenchless crossings, and a deeper installation may be suggested during detailed design to minimise the risk further by locating the drills within more consolidated geology, i.e. clays-. In addition, a bentonite breakout mitigation plan would be developed adhering to industry best practice during construction, which will help to minimise the likelihood of a breakout. This will include ensuring effective removal of the cuttings from the borehole which is a key component of avoiding breakouts.</p> <p>There would be other mitigation measures that can be adopted to mitigate specific impacts once such impacts are discernible following finalisation of the onshore cable corridor and working practices. For the River Wensum SSSI/SAC and Weybourne Cliffs SSSI this will include minimising any artificial lighting</p>	Minimise any direct impacts from construction on statutory sites	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					requirements of the nearby parts of the construction site, and/or careful design of any essential lighting nearby. Appropriate hydrological pollution prevention measures will also be adopted (as outlined in Chapter 18 Water Resources and Flood Risk [APP-104]).		
20.5	20.6.1.1.3	Additional	Statutory designated nature conservation sites	Impact on statutory designated nature sites	Other mitigation measures (set out in the Outline Code of Construction Practice) will be adhered to minimise air emissions, such as the development of a Dust Management Plan, with measures including, but not limited to: <ul style="list-style-type: none"> Undertake daily on-site and off-site dust inspection, where dust sensitive receptors are nearby; Plan the site layout so that machinery and dust causing activities are located away from sensitive receptors, as far as is practicable and Ensuring all vehicles switch off engines when stationary, i.e. no idling vehicles. 	Minimise any direct impacts from construction on statutory sites	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.6	20.6.1.2.3	Additional	Habitat Destruction or Damage, or Construction Disturbance to Non-Statutory Designated Nature Conservation Sites	Impact on existing habitats	The principal mitigation measure for addressing potential indirect impacts to non-statutory designated sites is secured through the embedded mitigation measures of avoiding these sites through the adoption of HDD. In addition to the embedded mitigation measures of avoiding these sites through the adoption of HDD, artificial lighting requirements associated with the onshore construction works will only be used where it is required and designed in accordance with BCT guidance for artificial lighting (Outline Code of Construction Practice (Revision G) document reference: 9.17). Appropriate hydrological pollution prevention measures will also be adopted (as outlined in Chapter 18 Water Resources and Flood Risk [APP-104]).	Minimise any impacts on habitats from construction	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.7	20.6.1.3.3	Additional	Habitat loss or damage	Impact on arable habitats	Arable field margins would be reinstated, either by retaining stripped turfs and reinstating them after construction, or by re-sowing with a suitable grassland and/or wildflower mix. Further details of proposals to reinstate and, where possible, enhance habitats such as arable field margins impacted by SEP and DEP are presented in the Outline Ecological Management Strategy Plan (Revision E) (document reference 9.19). No other mitigation for impacts to arable habitats are considered necessary.	Minimise any loss or damage to arable habitats from construction	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.8	20.6.1.4.5	Additional	Habitat loss or damage	Impact on grassland habitats	As with all other valued habitats, the footprint of works within grasslands, particularly those which are not improved grasslands, would be minimised and the duration of works within these habitats kept as short as possible. In areas comprising well-established and ecologically valued grassland swards that cannot be avoided by the footprint of the works, seeds or green hay from the existing and surrounding vegetation would be collected and spread once the works are	Minimise any loss or damage to grassland habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					complete. This is expected to be the best solution to reinstate affected areas of grassland, particularly at the landfall area where the coastal grassland generally consists of open, short turf. Further details relating to reinstatement of such habitats is provided in the Outline Landscape Management Plan (Revision D) [REP5-031] (document reference 9.18).		
20.9	20.6.1.5.5	Additional	Habitat loss or damage	Impact on woodland habitats and biodiversity	<p>As described above, the primary (embedded) mitigation measure for avoiding direct impacts to woodland habitats has been the avoidance of this habitat wherever possible. This has included reducing the width of the working corridor as far as practical where woodland areas cannot be avoided. Where woodland habitat cannot be avoided, trenchless techniques (i.e. HDD) have been selected to avoid the loss of woodland habitat, which has resulted in 20.05ha of the 28.16ha of woodland (all types) being avoided. An Outline Landscape Management Plan (Revision D) [REP5-031] (document reference 9.18) and an Outline Ecological Management Plan (Revision E) (document reference 9.19), which both form part of the DCO application, outlines the preferred approach to clearance of each section of woodland and proposed appropriate measures for reinstatement of woodland habitat. There would be options for enhancement of woodlands, especially plantations which can often have limited structural and species diversity that could be ecologically enhanced after the works.</p> <p>A pre-construction walkover survey would be undertaken by an appropriately qualified arboriculturist. This survey will define specific mitigation measures that would be implemented to protect trees that are located adjacent to the working areas. This will include the identification of root protection areas. The arboricultural report would be submitted to and agreed with the Local Planning Authority prior to the commencement of any construction works. In addition, the following mitigation measures will also be undertaken:</p> <ul style="list-style-type: none"> • The roots of retained trees along the edge of the working width would be protected from soil compaction by the enforcement of Root Protection Areas that would be fenced off from the construction (the extent of which would be calculated using guidance from BS5837:2012); and • Facilitation pruning may be recommended where tree crowns are at risk from impact by machinery or high sided vehicles. 	Minimise any loss or damage to woodland habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP) DCO Schedule 2, Part 1, Requirement 11, Arboricultural Survey Report
20.10	20.6.1.6.3	Additional	Habitat loss or damage	Impact on scrub habitats	Where areas of scrub have been removed, these will be reinstated with like-for-like species. Ecological enhancements and opportunities for BNG associated with SEP and DEP will also include replanting areas of scrub.	Minimise any loss or damage to scrub habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					Further details on scrub removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031] (document reference 9.18) and the Outline Ecological Management Plan (Revision E) (document reference 9.19) that are being submitted with the DCO.		
20.11	20.6.1.7.3	Additional	Habitat loss or damage	Impact on hedgerow habitats	Replacement planting of removed hedgerows would be implemented during the first planting season following completion of the construction works, except for tree / woodland removal which would not be re-planted within the 20m (SEP and DEP concurrently or sequentially) or 10m (SEP or DEP in isolation) operational easement. Gaps in hedges with new planting would be visible for a number of years following completion of construction (medium-term duration) until planting matures. Where hedgerow trees have been removed the approach would be to replant them within the hedgerow adjacent to the operational easement but still within the DCO order limits, subject to agreement with the landowners.	Minimise any loss or damage to hedgerow habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.12	20.6.1.7.3	Additional	Habitat loss or damage	Impact on hedgerow habitats	A suitable list for planting will be provided for each section of hedgerow or hedgerow tree to be reinstated, to ensure continuity and suitability. In general, hedgerow replanting will use native hedgerow species such as hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , field maple <i>Acer campestre</i> , dog-rose <i>Rosa canina</i> , hazel <i>Corylus avellana</i> , dogwood <i>Cornus sanguinea</i> , crab apple <i>Malus sylvestris</i> and holly <i>Ilex aquifolium</i> . It is likely that most replanting of hedgerow trees will use pedunculate oak <i>Quercus robur</i> , although the selection will depend in part on the species of tree being removed, with like-for-like replacement considered where ecologically suitable.	Minimise any loss or damage to hedgerow habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.13	20.6.1.7.3	Additional	Habitat loss or damage	Impact on hedgerow habitats	Ecological enhancements and opportunities for BNG associated with SEP and DEP will focus in part on hedgerow habitat. Where landowners are agreeable, existing gaps in hedgerows would be in-filled and new hedgerows would be planted along currently un-hedged boundaries. This planting would use a range of suitable native species, such as those listed above. Further details on hedgerow and tree removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031] (document reference 9.18) and the Outline Ecological Management Plan (Revision E) (document reference 9.19) that are being submitted with the DCO	Minimise any loss or damage to hedgerow habitats and enhance conditions	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.14	20.6.1.8.3	Additional	Habitat loss or damage	Impact on water course habitats	Where temporary dams are required during the trenched crossing works, the length of time that these would be in place would be kept to a minimum. Furthermore and prior to dewatering the area between the temporary dams, a fish rescue would be undertaken. Flumes or pumps would be	Minimise any loss or damage to water course habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					adequately sized to ensure that flows downstream are maintained whilst minimising upstream impoundment. Scour protection will also be used to protect the riverbed (and its associated habitats) downstream of the dam from high energy flow at the outlets of flumes and pumps.		
20.15	20.6.1.9.3	Additional	Potential Spread of Invasive, Non-Native Species (INNS)	Impacts arising from the spread of non-native species	<p>Prior to the commencement of construction works, an INNS Management Plan would be developed for approval by the relevant stakeholders. This plan will likely include the following measures:</p> <ul style="list-style-type: none"> • A plan of all INNS locations and extents; • A protocol for removing INNS and for managing the waste generated; • Good site practice measures for managing the spread of INNS during works at watercourses; and • A requirement for an Ecological Clerk of Works (ECoW) and details of their responsibilities with respect to INNS. 	Minimise any spread of non-native species	<p>DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)</p> <p>DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)</p>
20.16	20.6.1.10.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on badgers or badger habitat	<p>Pre-construction badger surveys would be undertaken to confirm the location and status of badger setts within and up to 30m from the DCO order limits. These surveys would be completed within no more than one year of the proposed construction start dates, and ideally during the appropriate survey season (October and/or February to April, inclusive, according to NatureScot (formerly SNH) best practice badger survey guidance note, or during “winter months” according to the Mammal Society guidance) although surveys are possible throughout the year). The findings from the pre-construction surveys will inform precise mitigation requirements, including any necessary badger licences to close any active setts which could be damaged or disturbed by proposed works. Disused setts which have shown no signs of activity for at least 12 months can be closed without a badger Development Licence. Alternatively, if a sett shows no signs of current use and it can be thoroughly monitored for 21 consecutive days during which no badger activity is recorded, it can then also be considered disused. Monitoring in this scenario would involve ‘soft-blocking’ all entrance holes (such as with sticks, which will be dislodged by badgers if entering/exiting the holes) and use of automated trail cameras to monitor the entrance holes</p>	Minimise harm to badgers and badger habitat from construction	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.17	20.6.1.11.3	Additional	Potential mortality, harm or disturbance of protected species	Impacts on bats or bat roosts	<p>As detailed in the draft European Protected Species (EPS) Mitigation Licence, the mitigation measures that would be undertaken comprise:</p> <p>(a) inspection of bat roost features through a climbing inspection by a licenced ecologist either the day before or the day of felling. Employing exclusion devices and blocking unoccupied roosts prior to the commencement of works;</p>	Minimise any impacts from construction on bats or bat roosts	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>(b) provision of appropriate replacement roosts (i.e. one bat box per confirmed bat roost, i.e. two bat boxes in total) installed on nearby trees prior to felling. These will provide a roost for any bats translocated following soft felling and will also provide short/medium term compensation for the lost roosts. Longer term compensation will be achieved by planting a new oak tree near to each felled tree;</p> <p>(c) an ecologist providing the tree surgeon(s) with an induction on bat presence, legal protection and the Method Statement protocol prior to felling;</p> <p>(d) carrying out tree removal under the supervision of a licensed bat worker when the temperature is suitable (i.e. not in freezing conditions);</p> <p>(e) soft felling the relevant bat roost feature (if they cannot be confirmed to be vacant), by carefully rigging the feature and lowering it to the ground whereby the relevant features will be inspected by an ecologist; and</p> <p>(f) capture and release of any bats encountered during works by a Level 2/3/4 licensed bat worker into replacement roosts positioned away from the proposed works on nearby suitable trees.</p>		
20.18	20.6.1.12.3	Additional	Potential mortality, harm or disturbance of protected species	Impacts on bats or bat roosts	<p>Lighting required during the construction phase will only operate where necessary and will be directional to avoid unnecessary illumination.</p> <p>Within areas where high or very high foraging/commuting bat activity has been recorded, works within these areas will be restricted to daylight hours only where possible between April to October inclusive.</p>	Minimise any impacts from construction on bats or bat roosts	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.19	20.6.1.13.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on breeding birds or the nests and habitats of breeding birds	The key measure to avoid impacts to nesting will involve the removal of vegetation such as hedgerows and scrub outside of the main bird nesting season which runs from 1st March to 31st August. In locations where this measure cannot be accommodated, certain habitats (such as hedgerows and small amounts of scrub) would be checked by an ecologist for the presence of active birds' nests. Where this check confirms the absence of active nests, clearance works can proceed shortly after, within no more than a few days of the check. If active birds' nests are found, these would be retained in-situ and allowed to reach their natural conclusion without being disturbed or damaged.	Avoid impacts to breeding birds, nests and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.20	20.6.1.13.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on breeding birds or the nests and habitats of breeding birds	<p>The following mitigation measures would be employed:</p> <ul style="list-style-type: none"> Pre-construction bird surveys would be undertaken to establish the presence of breeding birds; 	Avoid impacts to breeding birds, nests and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> Measures would be adopted to minimise noise, light and disturbance on identified breeding birds, such as visual screening (e.g. opaque fencing) where necessary; Construction activities would be monitored by an ECoW or suitably qualified ornithologist, who would seek to ensure compliance with the Wildlife and Countryside Act 1981 by avoiding destruction of nests, eggs or young, and affording increased protection from disturbance to Schedule 1 species breeding birds; and Where breeding bird activity is recorded, such construction works (excluding vehicle and personnel movements) may be halted immediately until a disturbance risk assessment is undertaken by a suitably qualified ecologist. The risk assessment would consider the nature of construction activity, likelihood of disturbance, and possible implications of the construction activities on the breeding attempt and set out measures to ensure that no disturbance occurs. Where it is determined that breeding birds are not likely to be affected, construction works will continue. Where it is determined that breeding birds may be affected, additional mitigation works would be implemented to prevent disturbance. Where, in the opinion of the suitably qualified ecologist, disturbance cannot be avoided by mitigation, construction works within the area of disturbance would be suspended until chicks have fledged. 		
20.21	20.6.1.14.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on over-wintering birds and associated habitats	Where construction works are undertaken within sugar beet fields or functionally linked habitat between November and January, a pre-construction survey will be undertaken to record the distribution and abundance of pink-footed geese and the distribution of harvested sugar beet likely to be affected during the winter season within which construction works will be undertaken. The findings of these pre-construction surveys will determine whether mitigation measures to reduce disturbance will be required; however, such mitigation measures may comprise pre-work habitat manipulation works to actively discourage bird species from using the fields where works are required and subsequently installing exclusion fencing to deter birds from the area as well as ensuring all lighting (if required) is only directed onto the construction works area.	Avoid impacts to over-wintering birds and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.22	20.6.1.14.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on over-wintering birds and associated habitats	During the construction works and should pink-footed geese be present, the ECoW will be responsible for advising on the appropriate levels of mitigation, e.g. watching briefs, tool box talks to the construction personnel etc, as presented in the Outline Ecological Management Plan.	Avoid impacts to over-wintering birds and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
20.23	20.6.1.15.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on great crested newts or associated habitat	SEP and DEP will adopt a District Level License (DLL) approach prior to construction to ensure compliance with the legal status of GCN and mitigate for potential impacts on this species. DLL involves providing a Conservation Payment to fund a net increase in habitat for GCN at a county level, rather than mitigate for impacts specifically within and around the DCO order limits. Further GCN surveys are not necessarily required to inform a DLL application prior to the commencement of construction works associated with onshore elements of SEP and DEP. However, updated survey data could be used (if available) to refine the DLL Conversation Payment calculation. A provisional DLL certificate was provided by NE on 15 th August 2022 and is included as an appendix to the Planning Statement (Revision B) (document reference 9.1) [AS-031]; full procurement of the DLL would be undertaken within no more than 12 months prior to the commencement of onshore construction works.	Minimise the impacts from construction on great crested newts or associated habitat	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.24	20.6.1.16.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on rare fish/invertebrates or associated habitats	The following mitigation measures will be employed at those locations which are identified as being suitable for invertebrates and/or fish: <ul style="list-style-type: none"> In order to ensure that there are no adverse impacts resulting from the installation of temporary dams, the amount of time that temporary dams are in place would be restricted to a reduced programme where possible, and flumes or pumps would be adequately sized to maintain flows downstream of the obstruction whilst minimising upstream impoundment. Furthermore, a fish rescue (as presented in the Outline Code of Construction Practice (Revision G) (document reference 9.17)) would be undertaken in the area between the temporary dams prior to dewatering; and Bed and bank habitats will be reinstated and where possible improved following the completion of the works. 	Minimise the impacts from construction on rare fish/invertebrates or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.25	20.6.1.17.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on reptiles or associated habitat	The potential risks to reptile populations would be addressed by the adherence of best-practice, and industry accepted, measures at the small number of localised areas known to support reptiles. Further details are presented in the Outline Ecological Management Plan (Revision E) (document reference 9.19) These measures would include; the implementation of habitat manipulation works to temporarily displace reptiles from the proposed construction footprint. Alternatively, where this would not sufficiently mitigate risks, a reptile translocation exercise would be undertaken. Reptile exclusion fencing may need to be installed around areas of suitable habitat to ensure reptiles do not re-enter these areas during and after the translocation effort. This would involve capture of reptiles from within the area of works and	Minimise the impacts from construction on reptiles or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					translocation of any captured animals would be moved by a suitably qualified ecologist to a pre-identified area of suitable habitat (i.e. receptor site) that is located outwith the working area. On completion of the works, the reptile exclusion fencing would be removed, and reptiles allowed to naturally return to the area.		
20.26	20.6.1.18.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on riparian mammals or associated habitat	The potential risks to reptile populations would be addressed by the adherence of best-practice, and industry accepted, measures at the small number of localised areas known to support reptiles. Further details are presented in the Outline Ecological Management Plan (Revision E) Outline Ecological Management Plan (document reference 9.19) These measures would include; the implementation of habitat manipulation works to temporarily displace reptiles from the proposed construction footprint. Alternatively, where this would not sufficiently mitigate risks, a reptile translocation exercise would be undertaken. Reptile exclusion fencing may need to be installed around areas of suitable habitat to ensure reptiles do not re-enter these areas during and after the translocation effort. This would involve capture of reptiles from within the area of works and translocation of any captured animals would be moved by a suitably qualified ecologist to a pre-identified area of suitable habitat (i.e. receptor site) that is located outwith the working area. On completion of the works, the reptile exclusion fencing would be removed, and reptiles allowed to naturally return to the area.	Minimise the impacts from construction on riparian mammals or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.27	20.6.1.18	Additional	Potential mortality, harm or disturbance of protected species	Impact on other priority species	In general, likely risks to these species can be addressed, at least in part, by adopting industry accepted best-practice measures.	Minimise the impacts from construction on other priority species	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.28	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Consultation	N/A	Recognition of the need for consultation with the National Trust in their position as a conservation organisation (Section 2.2)	N/A	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP) N/A
20.29	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Breeding birds	Impact on breeding birds	If active birds' nests are found, a suitable buffer will be put in place to protect the nest until the young have fledged. The buffer area will be based on species type and sensitivity (advice on this being provided by the ECoW or a suitably experienced ornithologist) but will be at least 5m and marked out to prevent accidental disturbance (advice on the most appropriate technique for the species and location being provided by the ECoW or a suitably experienced ornithologist). One nesting bird species, crossbill (specially protected when breeding under the provisions of Schedule 1 of the Wildlife & Countryside Act), breeds much earlier than most other bird species with nests active from January until April. Crossbills occur in Weybourne Woods and the tree clearance here will be	Minimise the impacts from construction on breeding birds	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					carried out in the autumn (September to November inclusive) to avoid both its breeding season and that of most other birds.		
20.30	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Breeding birds	Impact on breeding birds	The ECoW would advise on retention of an appropriate exclusion zone around the nest until this time. This advice will be based on species type and sensitivity but will be at least 5m and marked out to prevent accidental disturbance (advice on the most appropriate technique for the species and location being provided by the ECoW).	Minimise the impacts from construction on breeding birds	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.31	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Bats	Impact on roosting bats	All trees with High, Moderate or Low bat roost potential in accordance with Bat Conservation Trust guidelines would be soft-felled. Trees with Negligible roost potential will not need to be soft-felled. All tree surgeons would be briefed on this approach prior to commencing works on relevant trees.	Minimise the impacts from construction on roosting bats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.32	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Great crested newts	Impact on Great crested newts	'Reasonable Avoidance Measures' (RAMs). These are: • Phased vegetation clearance as described for reptiles above. • Rubble or log piles present within the construction footprint to be disassembled and moved during the newt active season (March to October inclusive). • Storage of materials that might act as a refuge for newts on hard standing or previously cleared ground. • Excavations and working areas to be managed so as not to create temporary waterbodies which may attract newts.	Minimise the impacts from construction on great crested newts	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.33	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Reptiles	Impact on roosting bats	At Hickling Lane (at the Onshore Substation Site) an additional procedure will be included in the reptile mitigation actions due to the presence of a population of slow worm. This reptile species is known to be less receptive to the habitat manipulation method described above (i.e. individuals are more likely to remain in-situ despite short-term habitat changes) compared to grass snake and common lizard. In addition to habitat manipulation, artificial refuges (as used for population monitoring) will be deployed in areas of suitable habitat which are within the proposed works footprint. When the artificial refuges are checked, any slow worms found will be caught by hand and moved to other adjacent and suitable habitat that borders Hickling Lane but at an appropriate distance from construction activities (but still inside the Order Limits). Such habitat is present and available for use within the same landholding as the substation. There is no movement of slow worms to distant/separate site(s) and for that reason this is no more than a 'micro-scale' translocation to known suitable, adjacent habitat. In the unlikely event that the ongoing monitoring finds slow worms returning to the proposed works footprints, the installation of reptile proof fencing will become necessary to prevent slow worms from moving back into the works areas from the nearby areas to which they have been moved.	Minimise the impacts from construction on reptiles	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
20.34	Deadline 3 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Potential mortality, harm or disturbance of priority species	Impact on otters / water voles or associated habitat	The first part of the pre-construction check will be that all watercourses within the DCO boundary will be re-appraised for the suitability of the habitat for otter and water vole as part of the updated Extended Phase 1 Habitat survey. Any watercourses which are found to provide optimal habitat to support otter and/or water vole will be the subject of more detailed field survey as part of the pre-construction surveys.	Minimise the impacts from construction on otters / water voles or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.35	Deadline 3 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Potential mortality, harm or disturbance of priority species	Impact on white-clawed crayfish or associated habitat	All watercourses within the DCO boundary will be re-appraised for their suitability for white-clawed crayfish as part of the updated Extended Phase 1 Habitat survey. Any watercourses which are found to provide suitable habitat for this protected species and which have not been previously surveyed (due to lack of survey access or because of a change in the suitability of the watercourse since the pre-application surveys), will be surveyed for white-clawed crayfish as part of the pre-construction surveys	Minimise the impacts from construction on white-clawed crayfish or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.36	Deadline 4 Submission - 9.17 Outline Code of Construction Practice (Revision D)	Additional	Potential mortality, harm or disturbance of priority species	Impact on crayfish or associated habitat	All the watercourse crossings where signal crayfish have been detected are to be undertaken using HDD, therefore reducing the risk of transferring signal crayfish or spores of crayfish plague to other watercourses.	Minimise the impacts from construction on crayfish or associated habitats	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
20.37	Deadline 3 Submission - 9.19 Outline Ecological Management Plan (Revision C)	Additional	Habitat loss or damage	Impacts on statutory designated nature sites and associated habitats	The HDD compound located on the floodplain of the river Wensum (but outside the SSSI and SAC) will be restored in accordance with the River Wensum Restoration Strategy and the River Wensum SAC conservation objectives.	Minimise the impacts from construction on statutory designated nature sites and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)
20.38	Deadline 4 Submission - 18.2 The Applicant's Comments on Responses to the ExA's 2WQ	Additional	Habitat loss or damage	Impact on woodland habitats and biodiversity	The Applicant confirms that replacement hedgerow and tree planting will be undertaken on a minimum 1:1 basis to ensure no loss specifically of the number of individual trees or hedgerows.	Minimise any loss or damage to woodland habitats	DCO Schedule 2, Part 1, Requirement 11 Outline Landscape Management Plan
20.39	Deadline 7 Submission - 9.17.1 Outline Code of Construction Practice (Revision F) (Tracked)	Additional	Habitat loss or damage	Impact on woodland habitats and biodiversity	Buffer zones surrounding retained areas of woodland and trees will have a radius of at least 12 times the stem diameter of the tree (or 15 times the stem diameter for veteran/ancient trees) The buffer zone should be 5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter or as advised by the Arboriculturist and informed by Tree Protection Plans. This will create a minimum root protection area.	Minimise any loss or damage to woodland habitats	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					A 30m buffer from the ancient woodland, Colton Wood, will be maintained at all times in which no construction vehicles and machinery will enter and no materials or activities will take place.		
20.40	Deadline 7 Submission – 9.19.3 Outline Ecological Management Plan (Revision D) (Tracked)	Additional	Potential mortality, harm or disturbance of protected species	Impact on Pink Footed Geese	<p>Where works are undertaken between November and January and within areas of land which are potentially functionally linked to the North Norfolk Coast SPA/Ramsar site (i.e. sugar beet fields within 10.4km of the North Norfolk Coast SPA/Ramsar site), a pink-footed goose mitigation plan will be prepared and submitted to Natural England prior to its implementation and commencement of construction activities. The details of the plan will have regard to Natural England's emerging best practice advice on North Norfolk Coast SPA Pink Footed Geese.</p> <p>Potential mitigation measures could include:</p> <ul style="list-style-type: none"> • In the October prior to construction works commencing, all fields which are within the Order Limits and surrounding 200m buffer and also within 10.4km of the North Norfolk Coast SPA/Ramsar, would be inspected to identify and map fields which: <ul style="list-style-type: none"> ○ Have crop cover suitable for use by pink-footed geese; ○ Are over 6 hectares in size; and, ○ In which construction works are due to commence between November and January inclusive. • Any fields which comply with the above criteria would then be monitored by the ECoW at a rate of once per week between the following November and January. • Where the monitoring finds that pink-footed geese are present on a field, no construction works will take place within that field or the surrounding 200m until the geese have concluded their foraging activity, which will be confirmed by ongoing monitoring. Once foraging has concluded, construction works within that field and the surrounding 200m will be able to commence. • At other suitable fields where monitoring finds no evidence of pink-footed geese foraging, no construction works will commence until after January. This restriction will ensure that the resource of potential pink-footed goose foraging habitat is not pre-emptively depleted by construction works. • The presence of foraging pink-footed geese would be determined by visual observation of the birds themselves. 	Minimise potential impacts on Pink Footed Geese	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					plus inspections of the ground cover to check for foraged crops and bird droppings.		
20.41	Deadline 8 – 9.17.1 Outline Code of Construction Practice (Revision G) (Tracked)	Additional	Potential mortality, harm or disturbance of protected species	Impacts to the River Wensum SAC	To reduce the risk of AEoI to the River Wensum SAC, Natural England will be consulted on the Bentonite Breakout Plan that will be submitted in respect of works that cross the River Wensum.	Minimise impacts to the River Wensum SAC	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
Chapter 21 Onshore Archaeology and Cultural Heritage							
21.1	21.3.3	Embedded	Designated heritage assets	Direct, physical impacts to designated heritage assets	Route refinement process undertaken to avoid all designated heritage assets, wherever possible.	Minimise impacts to designated heritage assets.	N/A
21.2	21.3.3	Embedded	Non-designated heritage assets	Direct, physical impacts to non-designated heritage assets	Route refinement process undertaken to avoid all non-designated heritage assets, wherever possible.	Minimise impacts to non-designated heritage assets.	N/A
21.3	21.6.1.1.3	Additional	Designated Heritage Assets	Direct Physical Impact on (permanent change to) Designated Heritage Assets	In respect of the Mannington and Wolterton Conservation Area (275), the landscape through which the onshore cable corridor is constructed will be sensitively backfilled and reinstated following construction, with field boundaries and hedgerows returned to their pre-construction condition. As such no significant adverse effects are anticipated to occur following the implementation of proposed mitigation work. This will include sensitive management of the cable installation works through the Conservation Area followed by controlled backfilling and reinstatement, and the returning of field boundaries and hedgerows to their pre-construction condition. All backfilling and reinstatement works of archaeologically sensitive areas will be carried out in accordance with the Outline WSI (Onshore) (Revision C) [REP2-032] (document reference: 9.21).	Minimise impacts to designated heritage assets.	DCO Schedule 2, Part 1, Requirement 18, Written Scheme of Archaeological Investigation
21.4	21.6.1.2.3	Additional	Non-designated Heritage Assets	Direct Physical Impact on (permanent change to) Non-designated Heritage Assets	SEP-SEL and DELP would undertake additional programmes of post-consent survey and evaluation which, of relevance to sub-surface archaeological remains, may include any outstanding geophysical survey, a scheme wide programme of trial trenching, and targeted metal detecting. This strategy is presented in the Outline WSI (Onshore) (Revision C) [REP2-032] Outline WSI (Onshore) (document reference-9.24) . The initial informative stages of mitigation work may indicate the presence of previously unknown buried archaeology (and further verify previously known/anticipated buried remains as indicated by the previous non-intrusive survey methods), enabling the resource to be appropriately	Minimise impacts to non-designated heritage assets.	DCO Schedule 2, Part 1, Requirement 18, Written Scheme of Archaeological Investigation

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>addressed by means of mitigating any impacts in a manner that is proportionate to the significance of the remains present.</p> <p>Additional mitigation beyond the initial informative stages is envisaged to comprise a combination of the following recognised standard approaches:</p> <ul style="list-style-type: none"> • Further advance and enacting of preservation in situ options and requirements (e.g. avoidance/micro-siting/HDD etc. where possible); • Set-piece (open-area) Excavation: including subsequent post-excavation assessment, and analysis, publication and archiving; • Strip, Map and Record (or Sample) Excavation: including subsequent post-excavation assessment, and analysis, publication and archiving; • Watching Brief (targeted and general archaeological monitoring and recording): including subsequent post-excavation assessment, and analysis, publication and archiving (where appropriate); • Earthwork Condition Surveys: including subsequent reporting and archiving (followed by backfilling and reinstatement, where required on a case-by-case basis); and • Geoarchaeological/Palaeoenvironmental Surveys: including subsequent reporting, deposit model and archiving. <p>Impact to the HLC (including hedgerows and parish boundaries) would be minimised by returning field boundaries/areas/hedgerows to their pre-construction condition and character post-construction, as part of a sensitive programme of backfilling and reinstatement/landscaping. Certain hedgerows and field boundaries (e.g. parish boundaries) may require recording prior to the construction process and enhanced provisions made during backfilling and reinstatement.</p> <p>The site-specific measures adopted by SEP-SEL and DELP would be determined post-consent as SEP and DEP progress in a specific and bespoke manner, tailored on a case-by-case/area-by-area basis (as required) accordingly and in response to the combination of onshore archaeological and cultural heritage assessment. Opportunities to optimise the programme, including expedient commencement of archaeological work in the immediate post-consent stages will</p>		

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>also be sought in ongoing discussion and agreement with NCC Historic Environment Service (HES) and Historic England.</p> <p>The preferred and optimum mitigation measure is preservation in situ, wherever possible. By avoiding sub-surface archaeological remains (sites/features), either largely or in their entirety (as indicated by existing and available data), the magnitude of impact may be reduced depending on the extent of the site/feature in question (with reference to change or impact upon heritage significance) and the degree to which preservation in situ has been applied. Where avoidance is not possible, significant impacts upon sub-surface archaeological remains may potentially to a degree be off-set by the application of appropriate alternative mitigation measures which serve to preserve archaeological remains, where present, by record (e.g. following intrusive evaluation and subsequent excavation, where required). Although preservation by record cannot be considered to reduce the magnitude of impact (and associated significance of effect) per se, given the physical loss of a given site/feature, the acquisition of a robust archaeological record of a site/feature may be considered to adequately compensate identified, recognised and acceptable harm to a heritage asset in line with industry standard good practice mitigation measures.</p>		
21.5	21.6.2.1.3	Additional	Permanent change to the setting	Permanent Change to the Setting of Heritage Assets (both Designated and Non-Designated) which could affect their Heritage Significance	Best practice design of the onshore substation and permanent infrastructure that would be sympathetic to the surrounding landscape to mitigate the visual elements of the infrastructure further.	Minimise impact upon the setting of the heritage assets.	DCO Schedule 2, Part 1, Requirement 18, Written Scheme of Archaeological Investigation
21.6	21.6.2.2	Additional	Cable heat loss	Indirect Physical Impact on (permanent change to) Designated and Non-designated Heritage Assets	Impacts will have been mitigated prior to construction via adherence to the Outline WSI (Onshore) (Revision C) [REP2-032] WSI (Onshore) which details mitigation and management measures to reduce indirect physical impacts to designated and non-designated heritage assets.	Minimise impact to designated and non-designated heritage assets.	DCO Schedule 2, Part 1, Requirement 18, Written Scheme of Archaeological Investigation
21.7	Deadline 1 Submission - 9.21 Outline Written Scheme of Investigation (Onshore) (Revision B) (Clean)	Additional	National Trust Land	NA	A section of the onshore export cables runs through Weybourne Woods which is part owned by the National Trust. Equinor acknowledge the National Trust's position as a conservation organisation and will consult with the National Trust's Archaeologist in developing the programme of post-consent archaeology survey and mitigation work insofar as is relevant to their land ownership within Weybourne Woods, as part of the National Trust's Sheringham Park Estate.	N/A	DCO Schedule 2, Part 1, Requirement 18, Written Scheme of Archaeological Investigation

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
Chapter 22 Air Quality							
22.1	22.3.3	Embedded	Site selection	Various	<p>SEP and DEP has undergone an extensive site selection process which has involved incorporating environmental considerations in collaboration with the engineering design requirements.</p> <p>Considerations include (but are not limited to) adhering to the Horlock Rules (for explanation see Chapter 3 Site Selection and Assessment of Alternatives) [APP-089] for the onshore substation and associated infrastructure, a preference for the shortest route length (where practical) and developing construction methodologies to minimise potential impacts.</p> <p>Key principles that have informed the onshore cable corridor route include:</p> <ul style="list-style-type: none"> • Preference for the shortest onshore cable corridor to minimise the overall footprint and the number of receptors that will be affected. • Avoid key constraints, where possible; and • Avoid populated areas, where possible. <p>Consideration has been taken into account for the following constraints:</p> <ul style="list-style-type: none"> • Sites designated for nature conservation; • Residential properties; and • Other infrastructure (e.g. buried cables, railways, roads). 	Minimise impacts relating to air quality.	N/A
22.2	22.6.1.1.5	Additional	Dust and PM ₁₀	Potential impacts relating to dust and PM ₁₀ from construction activities.	<p>A list of mitigation measures that are highly recommended for a medium risk site, as determined by Step 2 of the dust assessment, by the Institute of Air Quality Management (IAQM) are provided below:</p> <p>Communications:</p> <ul style="list-style-type: none"> • Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager. • Display the head or regional office contact information. • Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the local authority. The level of detail will depend on the risk and should include as a minimum the 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					highly recommended measures in this document. The desirable measures should be included as appropriate for the site.		
22.3	22.6.1.1.5	Additional	Dust management	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. Make the complaints log available to the local authority when asked. Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the logbook. Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked. Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site. Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period. Avoid site runoff of water or mud. Keep site fencing, barriers and scaffolding clean using wet methods. Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. Manage stockpiles to prevent wind whipping. Ensure all vehicles switch off engines when stationary - no idling vehicles. Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable. Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials. 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems. Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. Use enclosed chutes and conveyors and covered skips. Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. Avoid bonfires and burning of waste materials. 		
22.4	22.6.1.1.5	Additional	Construction	Potential impacts relating to dust and PM ₁₀ from construction activities	Ensure sand and other aggregates are stored in appropriate manner to minimise dust generation, for example the use of bunded areas.	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement-),19, Code of Construction Practice (CoCP)
22.5	22.6.1.1.5	Additional	Trackout	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. Avoid dry sweeping of large areas. Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. Record all inspections of haul routes and any subsequent action in a site logbook. Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> Access gates to be located at least 10 m from receptors where possible 		
22.6	22.6.1.1.5	Additional	Dust management	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary. Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate). Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing). 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)
22.7	22.6.1.1.5	Additional	Earthworks	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. Only remove the cover in small areas during work and not all at once. 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)
22.8	22.6.1.1.5	Additional	Construction	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> Avoid scabbling (roughening of concrete surfaces) if possible. Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust. 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)
22.9	22.6.1.2.5	Additional	Non-Road Mobile Machinery (NRMM)	Potential impacts relating to NRMM and air quality	<p>NRMM and plant would be well maintained. If any emissions of dark smoke occur, then the relevant machinery should stop immediately, and any problem rectified. In addition, the following controls should apply to NRMM:</p> <ul style="list-style-type: none"> All NRMM should use fuel equivalent to ultralow sulphur diesel (fuel meeting the specification within EN590:2004) where practicable; 	Minimise potential impacts relating to NRMM and air quality	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> All NRMM should comply with the appropriate NRMM regulations; All NRMM will be fitted with Diesel Particulate Filters (DPF) conforming to defined and demonstrated filtration efficiency (load/duty cycle permitting); The ongoing conformity of plant retrofitted with DPF, to a defined performance standard, should be ensured through a programme of onsite checks; and Fuel conservation measures should be implemented, including instructions to (i) throttle down or switch off idle construction equipment; (ii) switch off the engines of trucks while they are waiting to access the site and while they are being loaded or unloaded and (iii) ensure equipment is properly maintained to ensure efficient fuel consumption. 		
Chapter 23 Noise and Vibration							
23.1	23.3.3	Embedded	Construction phase works	Potential impacts relating to noise and vibration.	Commitment to Best Practice Measures (BPM) implemented during the construction phase, detailed in the Construction Environmental Management Plan.	Minimise potential impacts relating to noise and vibration.	DCO Schedule 2, Part 1, Requirement 21 2 (1), Code of Construction Practice (CoCP) DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
23.2	23.3.3	Embedded	Operational substation location	Potential impacts relating to noise and vibration.	Site selection has identified a single onshore substation site option in proximity to the existing Norwich Main substation which is at least 500m from the nearest residential properties.	Minimise potential impacts relating to noise and vibration.	N/A
23.3	23.3.3	Embedded	Operational substation noise	Potential impacts relating to noise and vibration.	Each main source of sound at the proposed onshore substation, which are capable of generating tones, can be fully enclosed where regard is given to other environmental impacts (e.g. landscape and visual effects). Certain equipment, such as the transformers and the shunt reactors, can be fully enclosed for operational and engineering reasons and, as such, a high degree of noise control can be applied to this equipment. Using these embedded measures, the substation will be designed to achieve the operational noise limits included in the relevant DCO condition.	Minimise potential impacts relating to noise and vibration.	N/A
23.4	23.3.3	Embedded	Operational vibration	Potential impacts relating to noise and vibration.	The substation plant would be designed and installed as to minimise vibration transmission from any plant items which might generate vibration. This control of vibration at source is necessary to maximise life of the plant and minimise maintenance. Typically, placing vibration isolation mounts into concrete pads would ensure that groundborne vibration is not perceptible beyond the immediate area of the substation.	Minimise potential impacts relating to noise and vibration.	N/A

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
23.5	23.3.3	Embedded	HDD at landfall location	Potential impacts relating to noise and vibration.	Long HDD (approximately 1.25km) avoiding trenching works within the intertidal and offshore cable laying vessels would be no closer than 1km from the shore.	Minimise potential impacts relating to noise and vibration.	N/A
23.6	23.6.1.1.3	Additional	Night time working	Potential impacts to noise sensitive receptors.	<p>Prior to construction, a Construction Noise Management Plan (CNMP) (as part of the CoCP) would be prepared, outlining BPM for noise mitigation including, but not limited to:</p> <ul style="list-style-type: none"> Ensuring plant and machinery is turned off when not in use; Using modern, quiet equipment and ensuring such equipment is properly maintained and regularly inspected; Informing local residents about the construction works, including the timing and duration of any particularly noisy elements; and Implement a grievance mechanism (e.g. complaint procedure) for local residents to report nuisance and other issues, including 24-hour contact details for a site representative. 	Minimise impacts to noise sensitive receptors.	<p>DCO Schedule 2, Part 1, Requirement 212(1),</p> <p>DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP) Code of Construction Practice (CoCP)</p>
23.7	23.6.1.1.3	Additional	Construction noise at landfall	Potential impacts to noise sensitive receptors.	Temporary screening around the work area or construction compound so that no part of the noise source is visible at the Noise Sensitive Receptor (NSR). BS 5228-1 indicates that screening provides 5 to 10 dB of attenuation, but the effectiveness is dependent on the distance to the noise source, and the extent to which line-of-sight is obstructed.	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
23.8	23.6.1.2.3	Additional	Construction noise along the cable corridor.	Potential impacts to noise sensitive receptors.	<p>Where significant impacts remain, the following further mitigation measures would be considered and included in the CNMP, where applicable:</p> <ul style="list-style-type: none"> Temporary screening around the work area or construction compound; Use of silencers and/or enclosures around noisy equipment; Reduced numbers of plant during sensitive periods where practicable; Reduced on-time of plant during sensitive periods where practicable; Increased separation distance between works and NSRs where practicable; Choosing alternative, lower impact equipment or methods where practicable; Where practicable, noisy works should be interspersed between quieter works to provide periods of respite; Where practicable, the works should be phased to ensure that the noisiest operations are performed during the least sensitive times; and 	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> Review the construction programme to minimise the duration of the works in proximity to NSRs where feasible. Minimising the duration of work is generally beneficial, if higher noise levels may result in a significant reduction in the overall duration of the works this should be considered. 		
23.9	23.6.1.1.3	Additional	Construction Transport	Potential impacts to noise sensitive receptors.	A Construction Traffic Management Plan (CTMP) would be developed to reduce peak SEP or DEP in isolation traffic flows causing significant impacts along the identified links, this will also serve to reduce the associated construction traffic noise impacts.	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
23.10	23.6.1.5.3	Additional	Cable Corridor	Potential impacts to noise sensitive receptors.	<p>A CNMP will be provided as part of the COCP (an Outline CoCP is provided with the application – document reference: 9.17), which will outline BPM for vibration mitigation including, but not limited to:</p> <ul style="list-style-type: none"> using non-vibratory ground compaction methods at distances of 8m or less from a receptor; choosing alternative, lower impact equipment or methods wherever possible; scheduling the use of vibration-causing equipment, at the least sensitive time of day; routing, operating or locating high vibration sources as far away from sensitive areas as possible; sequencing operations so that vibration-causing activities do not occur simultaneously; isolating the equipment causing the vibration on resilient mounts; and keeping equipment well maintained. 	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
23.11	23.6.2.1.9	Additional	Onshore Substation	Potential impacts to noise sensitive receptors.	<p>Detailed analysis of the predicted noise levels at NSRs in proximity to the onshore substation indicate that noise associated with SGT, 220kV SHR, 220kV Air Core Reactor and 440kV Filter Reactor components are the dominant contributors of noise from the onshore substation. Mitigation measures would therefore focus on introducing noise attenuation at these items of substation equipment.</p> <p>The operational noise predictions and recommended mitigation measures are reliant on the currently available substation plant sound power level data. The sound emissions from the equipment the original equipment manufacturer (OEM) installs may be different to those utilised in the predictions, this would alter the substation sound emissions and mitigation requirements. It is therefore necessary to define operational noise level limits which will need to be complied with by the OEM, based on predictive noise modelling and assessment to be undertaken during the detailed design phase.</p>	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 21, Control of Noise During Operational Phase

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
23.12	The Applicant's Comments to Relevant Representations (Doc 12.3) North Norfolk District Council ID 5	Additional	Construction	Potential impacts to noise sensitive receptors.	Onshore works will be undertaken within the certain hours (0700 hours and 1900 hours Monday to Friday, and 0700 hours to 1300 hours on Saturdays, with no activity on Sundays or bank holidays, except as specified in the requirement and unless otherwise agreed in writing with the Local Planning Authority).	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 20 Construction hours
23.13	The Applicant's Responses to the Examining Authority's First Written Questions (Document reference 12.4) ID Q1.20.2.2	Additional	Cable Corridor	Potential impacts to noise sensitive receptors.	Construction activities being undertaken straight after one another are not expected to result in noise levels over the Threshold Value for 10 days or more in any 15 day period. Nevertheless, a mitigation measure has been added to Section 9.1.2 of the Outline Code of Construction Practice (Revision B) [document reference 9.17] which requires that, where practicable, works are scheduled to avoid high noise levels at receptors for more than 10 days in any 15 consecutive days, or 40 days in any 6 consecutive months.	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
23.14	Deadline 4 Submission - 9.17 Outline Code of Construction Practice (Revision D)	Additional	Construction noise	Potential Cumulative impacts to noise sensitive receptors.	The appointed Principal Contractor will liaise with the principal construction contractors for the Hornsea Project Three and Norfolk Vanguard schemes, if the relevant projects overlap temporally and spatially. This liaison will ensure that simultaneous working at similar locations will be considered (alongside appropriate mitigation measures), thereby minimising the potential for cumulative construction noise effects to occur.	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
23.15	Deadline 4 Submission – 9.17.1 Outline Code of Construction Practice (Revision D) (Tracked)	Additional	Construction noise	Potential impacts to noise sensitive receptors.	The Contractor will obtain prior consent from Broadlands District Council under Section 61 of the Control of Pollution Act 1974 for the proposed main construction compound. Prior consent will also be obtained for the proposed secondary compounds, where deemed appropriate based on the predicted level of risk of noise-related disturbance. Any Section 61 consent that is obtained may contain site specific management and mitigation requirements for noise and vibration.	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
23.16	Deadline 7 Submission – 9.17.1 Outline Code of Construction Practice (Revision F) (Tracked)	Additional	Construction noise	Potential impacts to noise sensitive receptors.	A worst-case scenario could occur requiring night time working for the HDDs in emergencies or as stipulated by a Statutory Undertaker (e.g. Network Rail or National Highways). Mitigation measures such as the following could be used to minimise the likelihood that night-time working will be required: <ul style="list-style-type: none"> Commence works on each bore and each phase of reaming etc at the start of the shift with adequate planning to ensure that each phase of work is completed in a single shift; 	Minimise impacts to noise sensitive receptors.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<ul style="list-style-type: none"> • Manage the programme to ensure that no bores are started with the potential to not be completed before the end of the working week; • Maintain discussions with Statutory Undertakers and/or other Developers where projects interact and exchange designs and, where possible, reduce the length of the trenchless crossings ensuring that each activity can be completed in a normal shift; • Consider undertaking crossings in flat formation, reducing risk and duration the bore is exposed before the duct is installed. 		
Chapter 24 Traffic and Transport							
24.1	24.3.3	Embedded	Site selection	Various	<p>SEP and DEP has undergone an extensive site selection process which has involved incorporating environmental considerations in collaboration with the engineering design requirements. Considerations include (but are not limited to) adhering to the Horlock Rules for the onshore substation and associated infrastructure and developing construction methodologies to minimise potential impacts, including:</p> <ul style="list-style-type: none"> • Avoiding key constraints e.g. height or weight restrictions on the highway network, where possible; • Avoiding populated areas, where possible; • Avoiding proximity to residential dwellings; and • Minimising impacts to local residents in relation to access to services and road usage, including road and footpath closures. 	Minimising potential impacts relating to traffic and transport.	N/A
24.2	24.3.3	Embedded	Duct installation strategy	Various	<p>The onshore cable duct installation strategy is proposed to be conducted in a sectionalised approach in order to minimise impacts. Construction teams would work on a sections of up to 1km at a time and once the cable ducts have been installed, the section would be back filled and the top soil replaced before moving onto the next section. This would minimise the amount of land being worked on at any one time and would also minimise the duration of works on any given section of the route.</p> <p>This strategy has informed suitable access points and optimum routes for construction traffic and also serves to minimise daily construction traffic demand.</p>	Minimising potential impacts relating to traffic and transport.	N/A
24.3	24.3.3	Embedded	HDD at Landfall	Potential restrictions at Weybourne Beach during construction.	HDD at landfall to avoid restrictions or closures to the Weybourne Beach during construction.	Minimising restrictions at Weybourne Beach during construction.	N/A

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
24.4	24.3.3	Embedded	Trenchless Crossings	Various	Commitment to trenchless crossing techniques to minimise disruption and delay to users of the following transport routes: <ul style="list-style-type: none"> North Norfolk Railway Cambridge to Norwich Railway All A and B roads and 16 other local roads The proposed Norwich Western Link Road 	Minimise potential impacts relating to traffic and transport to specific features.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
24.5	24.3.3	Embedded	Temporary Construction Compounds (TCCs)	Potential impacts to local communities	TCC locations have been located close to main A roads wherever possible minimising impacts upon local communities and utilising the most suitable roads. TCCs are located away from population centres where practical to reduce impact on local communities and population centres.	Minimise potential impacts to local communities relating to traffic and transport	N/A
24.6	24.3.3	Embedded	Onshore infrastructure access	Potential impacts on sensitive receptors, road safety and local routes	Access points located to minimise impacts on sensitive receptors, road safety and local routes.	Minimise potential impacts on sensitive receptors, road safety and local routes	N/A
24.7	24.3.3	Embedded	Vehicle trips	Potential impacts to local network	Construction of a typically 5m wide haul road with a length up to 60km to reduce the number of access points and Heavy Goods Vehicle (HGV) trips on the local road network. Carefully selected delivery routes to minimise impacts on the sensitive receptors within the TTSA.	Minimise impacts of HGV trips on the local road network	N/A
24.8	24.3.3	Embedded	Vehicle routing	Potential impacts to local communities	Links 91 (Blind Lane), 48 (Horsford), Cantley Road and as well as Attlebridge Village, Barford Village, Cawston Village, Oulton Village, Plumstead and Weston Longville Village are prohibited for use by SEP/DEP HGV traffic at the request of highway stakeholders and the local community.	Minimise potential impacts to local communities	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
24.9	24.3.3	Embedded	Construction accesses	Potential impacts to landowner, ecological features and road safety	Repositioning of numerous construction access locations to meet stakeholder and landowner requests, avoid ecological features and to ensure road safety.	Minimise potential impacts to landowner, ecological features and road safety	N/A
24.10	24.3.3	Embedded	Temporary scheme	Potential impacts to Blind Lane / Taverham Road	During an ETG meeting with NH (3 July 2021), NH requested that if improvements to the A47 are not completed prior to the commencement of SEP and/or DEP, that road safety improvements to the junction of the A47, Blind Lane and Taverham Road proposed by Hornsea Project Three (HP3) are retained/ re-introduced for the construction of SEP and DEP. These amendments include the closure of Blind Lane and creation of a left in left out only junction at Taverham Road and are detailed further within the OCTMP (document reference 9.16).	Minimise potential impacts to Blind Lane / Taverham Road	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
24.11	24.6.1.2.5	Additional	Enhanced TMP measures	Potential impacts in relation to severance	<p>Strategies for managing and monitoring HGV and LV are contained in the OCTMP (document reference 9.16).</p> <ul style="list-style-type: none"> Peak daily HGV demand not to exceed the forecast average daily HGV demand. Peak Hour LV demand not to exceed the forecast average peak hour demand. 	Minimise potential impacts of severance	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
24.12	24.6.1.3.5	Additional	Enhanced TMP measures	Potential impacts in relation to amenity	<p>Strategies for managing and monitoring HGV and LV are contained in the OCTMP (Revision D) [REP5-027] (document reference 9.16) and include:</p> <ul style="list-style-type: none"> Peak daily HGV demand not to exceed the forecast average daily HGV demand. Peak Hour LV demand not to exceed the forecast average peak hour demand. Peak daily HGV demand not to exceed the forecast average daily HGV demand. Peak Hour LV demand not to exceed the forecast average peak hour demand. 	Minimise potential impacts to in relation to amenity	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
24.13	24.6.1.3.5	Additional	Enhanced TMP measures	Potential impacts to driver delay	<p>Mitigation measures are captured within the OCTMP (Revision D) [REP5-027] (document reference 9.16) and are intended to provide an indicative and proportionate means of mitigating the potential impacts. The final measures and details will be agreed with the-NCC through the development of the CTMP prior to commencement of the authorised project.</p> <p>The proposed diversion routes and associated management measures for pedestrians and cyclists are captured within the OCTMP - (Revision D) [REP5-027] (document reference 9.16). The final diversion routes and timing of closures would be agreed with the-NCC and National Highways through the development of the CTMP prior to commencement of the authorised project.</p> <p>the-The following mitigation measures could be employed to reduce the impacts upon users of link 64:</p> <ul style="list-style-type: none"> Implementation of advanced signing to assist drivers in finding alternative routes. Ensuring that any road closures on nearby roads are staggered to minimise any cumulative traffic impacts within the same area. Ensuring all works would be undertaken during school holidays to minimise any impacts on school bus services. Liaising with bus operators to coordinate and facilitate bus routing amendments. 	Minimise potential impacts to driver delay	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
24.14	24.7.4.2.3	Additional	Enhanced TMP measures	Potential Cumulative impact in relation to amenity	Capping of cumulative traffic flows would be achieved through liaison with Hornsea Project 3 to establish their potential forward programme for deliveries via these links. Where potential exceedances of the caps are identified, the Contractor for SEP and DEP would reschedule deliveries to ensure the cumulative caps are not exceeded. The proposed approach to manage potential cumulative amenity impacts upon links 90, 132, and 143 is captured within the OCTMP (Revision D) [REP5-027] (document reference 9.16) .	Minimise potential cumulative impacts to in relation to amenity	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
24.15	The Applicant's Comments to Relevant Representations (Doc 12.3) Reepham Town Council ID 1	Additional	Construction	Impacts to residents and businesses	A Stakeholder Communications Plan will be developed which will ensure that residents and businesses affected by the construction works are kept updated during the construction phase. The outline code of construction practice is secured by Requirement 19 of the draft DCO (Revision K) [document reference 3.1].	Minimise potential impacts to local communities	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)
24.16	The Applicant's Comments to Relevant Representations (Doc 12.3) East of England Ambulance Service NHS Trust ID 24	Additional	Abnormal loads	Potential impacts to driver delay	The transformers for the SEP and DEP substation will require Special Order Abnormal Indivisible Loads (AIL). In addition, there may also be a requirement for non-Special Order AILs associated with large items of plant, cable drums, etc. To ensure that delays are managed and minimised, prior to the movement of any abnormal load the contractor would be required to submit notifications to the relevant authorities (police, highway authorities and bridge/ structure owners) through ESDAL (Electronic Service Delivery for Abnormal Loads). As part of this process, the relevant Police Force would carry out a risk- assessment and decide whether any action is required with regard to either the route or time of the proposed movement, including the safety of other road users or congestion likely to be caused. The ESDAL process would detail which of the proposed routes would be used and ensure the timing of AIL movements would be co-ordinated and potential impacts would not be significant.	Minimise potential impacts to driver delay	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
24.19	Deadline 3 Submission - 9.16 Outline Construction Traffic Management Plan (Revision C)	Additional	Onshore infrastructure access	Potential impacts on sensitive receptors, road safety and local routes	Following the submission of the DCO application, additional controls have been also agreed with NCC for access ACC25b. These measures include: • Limiting the duration of use of access ACC25b; • Ensuring the temporary traffic signals at ACC25b do not operate between the hours of 07:30 to 09:00 and 16:30 to 17:30; and • No SEP and/or DEP traffic movements should travel to access ACC25b between 07:30 to 09:00 and 16:30 to 17:30.	Minimise potential impacts relating to traffic and transport to specific features.	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
24.21	Deadline 3 Submission - 3.1.1 Draft Development Consent Order (Revision F)	Additional	Prior approvals	Various	<p>No specified work may commence until the programme of works has been approved by National Highways;</p> <p>(a) the following details relating to the specified work have been submitted to and approved by National Highways—</p> <p>(i) the detailed design information;</p> <p>(ii) details of any proposed road space bookings with National Highways;</p> <p>(iii) (if details have been supplied pursuant to paragraph 4(b)(ii) above) a scheme of traffic management; and</p> <p>(iv) the identity of the contractor and nominated persons.</p> <p>(b) (if the carrying out of a specified work requires the booking of any road space with National Highways and a scheme of traffic management) a process for stakeholder liaison has been submitted by the undertaker and approved by National Highways, such scheme to be capable of amendment by agreement between the undertaker and National Highways from time to time;</p> <p>(c) any stakeholder liaison that may be required has taken place in accordance with the process for such liaison agreed between the undertaker and National Highways under subparagraph 4(1)(d) above;</p> <p>(d) any further information that National Highways may reasonably request, such request to be made within 14 days of the submission of the detailed design information supplied to National Highways under paragraph 4(1)(b) or as soon as reasonably possible thereafter; and</p> <p>(e) the condition survey and a reasonable regime of monitoring of the structures, assets and pavements that are the subject of the condition survey has been submitted to and approved by National Highways.</p>	Minimise potential impacts relating to traffic and transport to specific features.	DCO Schedule 14, Part 14, Requirement 5, Construction of the specified works
24.22	Deadline 5 Submission - 9.16.1 Outline Construction Traffic Management Plan (Revision D) (Tracked)	Additional	Monitoring of construction traffic	Various	The outputs of the monitoring report would be discussed with highway authorities at a 'Monitoring Group'. The Monitoring Group would be chaired by the CTMPCo and would discuss the outcomes of the monitoring report and any remedial action that may be required.	Minimise potential impacts relating to traffic and transport to specific features.	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
Chapter 26 Landscape and Visual Impact Assessment							
26.1	26.3.3.1	Embedded	Cable corridor and HDD	Potential landscape and visual impacts	With regard to the onshore cable corridor, the first key design intervention was to have a combined cable corridor, and to underground the cables, thus avoiding the visual intrusion of new pylons and overhead cables during the operational phase. Subsequent cable routing has been designed to avoid settlement as far as possible (and thus reduce potential visual	Minimise potential landscape and visual impacts	NA

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					effects of the construction period), and to avoid crossing woodlands and areas or groups of trees, where possible. Where this is not possible, for example, Weybourne Wood within the Norfolk Coast AONB, would be retained, by utilising trenchless crossing techniques (See Chapter 4 Project Description (Revision C) [REP5-021] and Appendix 4.1 Crossing Schedule [APP-178]) to minimise impacts in so far as possible. The same approach (where necessary) is proposed at locations where the cable corridor crosses other features such as main roads, railways and watercourses. Where such an interaction occurs, any trees, hedgerows and other vegetation associated with the feature would not be affected as a consequence of the trenchless crossing.		
26.2	26.3.3.1	Embedded	Cable corridor and HDD	Potential landscape and visual impacts	Key design interventions included the selection of the final onshore substation site (chosen from the two options assessed at the PEIR) and reducing, in so far as possible, the height of the onshore substation's platform height from the maximum parameter assessed at the PEIR.	Minimise potential landscape and visual impacts	NA
26.3	26.3.3.1	Embedded	Cable corridor and HDD	Potential landscape and visual impacts	Where the cable corridor cross local roads, railways and/or watercourses, it would be installed via trenchless crossing techniques (such as HDD) and therefore avoid the loss of hedgerow and vegetation associated with the feature.	Minimise potential landscape and visual impacts	NA
26.4	26.3.3.1	Embedded	Vegetation removal	Impacts on trees, woodland and hedgerows	Where hedgerows and individual trees occur within the construction area of the cable corridor (and cables are not installed by trenchless techniques), they would be removed. Typically, hedgerows would be removed as follows: <ul style="list-style-type: none"> • within the 12m crossing for either SEP or DEP in isolation; or • within the 20m crossing for SEP and DEP (concurrently or sequentially). Where a bellmouth access junctions or cross-over points are required as part of a trenchless crossing, the following length would be removed: <ul style="list-style-type: none"> • Bellmouth access: 20m either side of the crossing for SEP and/or DEP (all scenarios). • Cross over point: 12m either side of the crossing for SEP and/or DEP (all scenarios). 	Minimise potential landscape and visual impacts	NA
26.5	26.3.3.1	Embedded	Vegetation removal	Impacts on trees, woodland and hedgerows	Hedges would be re-planted in all scenarios on their original alignment. Trees and woodland would be replanted within the construction corridor/Order Limits but outside the final permanent cable corridor easement. Where both SEP and DEP are built (concurrently or sequentially) the permanent easement will be 20m. Where only DEP or SEP is constructed, the permanent easement will be 10m. Within this permanent easement, tree planting would be prohibited. Planting would be implemented during the first planting season following the	Minimise any impacts on trees, woodland and hedgerows	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					completion of entire construction of the cable installation works, of either DEP or SEP (subject to landowner agreements), whether constructed together or sequentially, and maintained for ten years.		
26.6	26.3.3.2	Embedded	Site selection of the onshore substation	Impacts on trees, woodland and hedgerows	Work has been carried out to identify further measures to minimise tree, woodland and hedgerow removal. Further details on hedgerow and tree removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031] and Outline Ecological Management Plan (Revision E) (document reference 9.19) OLMP and OEMP (document reference 9.18 and 9.19) submitted with this DCO application.	Minimise any impacts on trees, woodland and hedgerows	DCO Schedule 2, Part 1, Requirement 11 and 12, Outline Landscape Management Plan (OLMP)
26.7	26.3.3.3	Embedded	Site selection of the onshore substation	Impacts on visibility of final site	<p>Landscape and visual considerations fed into the studies and final site selection process. The final onshore substation site has been identified as the most suitable site from a landscape and visual perspective for a number of reasons including:</p> <ul style="list-style-type: none"> • It lies within an area of arable fields enclosed by woodland, tree belts and hedgerows which restricts potential visibility and effects to a relatively small area of landscape. • The existing woodlands and tree belts provide a context where further tree and woodland planting to integrate the onshore substation into the landscape and provide further screening would be appropriate. • The site lies within an area already influenced by existing electrical infrastructure including the Norwich Main substation to the north, and lines of pylons and overhead wires, one of which crosses the fields west of the onshore substation site. Other existing infrastructure lies to the east – the Norwich-Stowmarket main railway line and A140. Grid and other infrastructure are already characteristic of this location. • The onshore substation lies west of the adjacent landscape character area (LCA) A1 Tas Rural River Valley. Policy DM 4.5 of the South Norfolk Development Management Development Document (adopted October 2015) states “Particular regard will be had to protecting the distinctive characteristics, special qualities and geographical extents of the identified Rural River Valleys and Valley Urban Fringe landscape character types”. Assessment identified that the site would not affect this LCA due to the presence of existing tree and woodland vegetation that would largely screen the onshore substation from the LCA. • There are relatively few sensitive visual receptors within close proximity to the site that have potential to have clear 	Minimise any visual impacts by selecting a more appropriate site	N/A

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>views of the onshore substation, or to be significantly affected.</p> <ul style="list-style-type: none"> There are no residential receptors that would have clear or close views of the onshore substation. Site selection is therefore a key part of the embedded mitigation proposals. 		
26.8	Deadline 3 Submission - 9.18.1 Outline Landscape Management Plan	Additional	Landscaping	Potential landscape and visual impacts	An arboricultural survey and assessment will be undertaken prior to the commencement of construction, to inform the detailed soft landscape design proposals post DCO consent award.	Minimise potential landscape and visual impacts	DCO Schedule 2, Part 1, Requirement 11 Outline Landscape Management Plan
26.9	Deadline 3 Submission - 9.18.1 Outline Landscape Management Plan	Additional	Landscaping	Potential impacts to local communities and protected species	<p>Work will be planned and carried out in a manner and at times to minimise unnecessary disturbance to local residents, as well as taking into account the correct timing of seasonal works such as pruning and hedge cutting to comply with good horticultural practice and any restrictions imposed by ecological constraints.</p> <p>In addition, if, whilst carrying out landscaping works, protected species are found on site, and no management plan is in place, works will cease. Further information on the main responsibilities of the appointed Ecological Clerk of Works (ECoW) are set out in Section 1.2.4 of the OEMP (Revision E) (document reference 9.19); covering their role in the monitoring and reporting of the landscape and ecological works that will be implemented prior to, during and post construction of the onshore elements of SEP and DEP.</p>	Minimise the potential impacts to local communities and protected species	DCO Schedule 2, Part 1, Requirement 11 Outline Landscape Management Plan
26.11	Deadline 2 Submission - 14.3 The Applicant's Comments on the Local Impact Reports	Additional	Landscaping	Potential landscape and visual impacts	The Applicant will liaise with the relevant planning authorities to ensure that appropriate and sensitive materials will be used in the detailed design development of the onshore substation in order to minimise the potential impacts that could arise on the surrounding landscape character and visual amenity within the local area.	Minimise potential landscape and visual impacts	DCO Schedule 2, Part 1, Requirement 10, Detailed design parameters onshore Design and Access Statement (Onshore)
Chapter 27 Socioeconomics and Tourism							
27.1	27.3.3	Embedded	Site selection	Socio-economic impacts to residential properties, historic and nature designations and infrastructure e.g. buried cables, railways, roads	SEP and DEP have undergone an extensive site selection process which has involved incorporating environmental considerations (avoiding residential properties, historic and nature designations and infrastructure e.g. buried cables, railways and roads;) in collaboration with the engineering design requirements.	Minimised impacts to socio-economics and tourism	N/A

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
27.2	27.3.3	Embedded	Long HDD at Landfall	Impacts to tourism	The Applicant has committed to install the cables at the landfall using HDD, thereby avoiding physical disturbance or prolonged access restrictions to Weybourne beach.	Minimised impacts to socio-economics and tourism	N/A
27.3	27.3.3	Embedded	Trenchless crossings	Impacts to tourism	The Applicant has committed to using trenchless crossing techniques to minimise disruption and delay to users on all A and B roads and 16 other local roads	Minimised impacts to socio-economics and tourism	N/A
27.4	27.3.3	Embedded	Temporary Construction Compounds (TCCs)	Impacts to tourism	TCC locations have been located close to main A roads wherever possible minimising impacts upon local communities and utilising the most suitable roads. TCCs are located away from population centres where practical to reduce impact on local communities and population centres.	Minimised impacts to socio-economics and tourism	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
27.5	27.3.3	Embedded	Vehicle Trips	Impacts to tourism	Construction of an (up to) 6m wide haul road with an approximate length of up to 60km to reduce the number of access points and Heavy Goods Vehicle (HGV) trips on the local road network. Carefully selected delivery routes to minimise impact on the sensitive receptors within the TTSA	Minimised impacts to socio-economics and tourism	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
27.6	27.3.3	Embedded	Construction Accesses	Impacts to tourism	Repositioning of numerous construction access locations to meet stakeholder and landowner requests.	Minimised impacts to socio-economics and tourism	DCO Schedule 2, Part 1, Requirement 15, Construction Traffic Management Plan (CTMP)
27.8	Deadline 2 Submission - 14.3 The Applicant's Comments on the Local Impact Reports	Additional	Construction	Skills and employment impacts	The Skills and Employment Plan will be the main strategic document for securing local economic and labour market benefits, and will be approved by Norfolk County Council, in consultation with the District Councils and the New Anglia Local Enterprise Partnership (NALEP).	Enhancement of skills and employability opportunities for host communities	DCO Schedule 2, Part 1, Requirement 26, Outline Skills and Employment Plan
27.9	The Applicant's Comments to Relevant Representations (Doc 12.3) Weybourne Parish Council ID 8	Additional	Construction	Socio-economic impacts on communities	A community benefit fund will be set up if SEP and DEP are successful in being granted consent. At this point the Applicant will consult with the community and stakeholders on an appropriate and complementary programme.	Additional financial benefit for local community projects	N/A-
Chapter 28 Health							
28.1	28.3.5	Embedded	Site selection	Disturbance	Wherever possible, avoid proximity to residential dwellings, schools, care homes, retirement homes, hospitals, doctors' surgeries, travellers' sites;	Minimised disturbance effects	N/A

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
					<p>Wherever possible, avoid proximity to public open space, public rights of way, or facilities that can form part of the health regimen of residents; and</p> <p>Wherever possible, minimise impacts to local residents and vulnerable groups in relation to access to services and road use (including footpath closure).</p>		
28.2	28.3.5	Embedded	Trenchless crossing (HDD) at landfall	Impacts to access.	HDD will be used at the landfall in order to avoid disturbances to the public. This will retain access to coastal paths and the beach during construction.	Minimised impacts to access.	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP) Code of Construction Practice DCO Schedule 2, Part 1, Requirement 19
28.3	28.3.5	Embedded	Roads	Impacts on journey times.	<p>Avoiding key constraints (e.g. height or weight restrictions on the highway network), where possible;</p> <p>Avoiding populated areas, where possible;</p> <p>Avoiding proximity to residential dwellings; and</p> <p>Minimising impacts to local residents in relation to access to services and road usage, including road and footpath closures.</p>	Minimised impacts on journey times.	N/A
28.4	28.3.5	Embedded	Onshore substation	Impacts associated with exposure.	Site selection for the onshore substation ensured that the location of the substation will include appropriate separation distance from areas where people spend extended periods of time (i.e. residential dwellings, schools and places of work) and includes fencing to provide a separation distance to avoid exposure that could be of concern to bypassers.	Minimised exposure.	N/A
28.5	Deadline 2 Submission - 14.4 The Applicant's Comments on Responses to the Examining Authority's First Written Questions	Additional	Construction	Impacts on mental health of local residents	Regular environmental meetings and debriefs will be held local to the site with representatives from the Project Team, the Principal Contractor and key sub-contractors to consider matters such as the status of outstanding items, reports of environmental incidents or complaints and stakeholder engagement.	Minimise impacts on mental health of local residents	DCO Schedule 10, Part 2, Requirement 13 Outline Project Environmental Management Plan
<p>No further mitigation measures required than those presented in other ES chapters used to inform the health assessment, namely:</p> <ul style="list-style-type: none"> Chapter 17 Onshore Ground Conditions and Contamination Chapter 18 Water Resources and Flood Risk 							

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation
<ul style="list-style-type: none"> • Chapter 19 Land Use, Agriculture and Recreation • Chapter 22 Air Quality • Chapter 23 Noise and Vibration • Chapter 24 Traffic and Transport • Chapter 27 Socio-Economics and Tourism 							