

**Norfolk Vanguard Offshore Wind Farm**

# **Statement of Common Ground**

**Marine Management Organisation**



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*Photo: Kentish Flats Offshore Wind Farm*

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## Glossary

CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CIA	Cumulative Impact Assessment
DCO	Development Consent Order
DML	Deemed Marine Licence
ES	Environmental Statement
ETG	Expert Topic Group
FLOWW	Fishing Liaison with Offshore Wind and Wet Renewables
HRA	Habitats Regulations Assessment
HDD	Horizontal Directional Drilling
IPMP	In Principle Monitoring Plan
LiDAR	Light Detection and Ranging
LSE	Likely Significant Effect
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
NV East	Norfolk Vanguard East
NV West	Norfolk Vanguard West
OWF	Offshore Wind Farm
PEIR	Preliminary Environmental Information Report
SoCG	Statement of Common Ground
SAC	Special Area of Conservation
SCI	Site of Community Importance
SNCB	Statutory Nature Conservation Bodies
UXO	Unexploded Ordnance

## Terminology

Array cables	Cables which link the wind turbines and the offshore electrical platform.
Landfall	Where the offshore cables come ashore at Happisburgh South
Mobilisation area	Areas approx. 100 x 100 m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400 kV overhead lines
Necton National Grid substation	The existing 400 kV substation at Necton, which will be the grid connection location for Norfolk Vanguard.
Offshore accommodation platform	A fixed structure (if required) providing accommodation for offshore personnel. An accommodation vessel may be used instead.
Offshore cable corridor	The area where the offshore export cables would be located.
Offshore electrical platform	A fixed structure located within the wind farm area, containing electrical equipment to aggregate the power from the wind turbines and convert it into

	a more suitable form for export to shore.
Offshore export cables	The cables which bring electricity from the offshore electrical platform to the landfall.
Onshore cable route	The 45m easement which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.
Onshore project substation	A compound containing electrical equipment to enable connection to the National Grid. The substation will convert the exported power from HVDC to HVAC, to 400 kV (grid voltage). This also contains equipment to help maintain stable grid voltage.
The OWF sites	The two distinct offshore wind farm areas, Norfolk Vanguard East and Norfolk Vanguard West.
Trenchless crossing zone	Temporary areas required for trenchless crossing works (e.g. HDD).

## 1 INTRODUCTION

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1. This Statement of Common Ground (SoCG) has been prepared between the Marine Management Organisation (MMO) and Norfolk Vanguard Limited (hereafter 'the Applicant') to set out the areas of agreement and disagreement in relation to the Development Consent Order (DCO) application for the Norfolk Vanguard Offshore Wind Farm (hereafter 'the project').
2. This SoCG comprises an agreement log which has been structured to reflect topics of interest to the MMO on the Norfolk Vanguard DCO application (hereafter 'the Application'). Topic specific matters agreed, not agreed and actions to resolve between the MMO and the Applicant are included. Points that are not agreed will be the subject of ongoing discussion throughout the examination process, wherever possible to resolve, or refine, the extent of disagreement between the parties.

### 1.1 The Development

3. The Application is for the development of the Norfolk Vanguard Offshore Wind Farm (OWF) and associated infrastructure. The OWF comprises two distinct areas, Norfolk Vanguard (NV) East and NV West ('the OWF sites'), which are located in the southern North Sea, approximately 70 km and 47 km from the nearest point of the Norfolk coast respectively. The location of the OWF sites is shown in Chapter 5 Project Description Figure 5.1 of the Application. The OWF would be connected to the shore by offshore export cables installed within the offshore cable corridor from the OWF sites to a landfall point at Happisburgh South, Norfolk. From there, onshore cables would transport power over approximately 60km to the onshore project substation and grid connection point near Necton, Norfolk.
4. Once built, Norfolk Vanguard would have an export capacity of up to 1800 MW, with the offshore components comprising:
  - Wind turbines;
  - Offshore electrical platforms;
  - Accommodation platforms;
  - Met masts;
  - Measuring equipment (Light Detection and Ranging (LiDAR) and wave buoys);
  - Array cables;
  - Interconnector cables; and
  - Export cables.
5. The key onshore components of the project are as follows:
  - Landfall;

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

## 1.2 Consultation with the MMO

6. This section briefly summarises the consultation that the Applicant has had with the MMO. Further information on the consultation process is provided in the Consultation Report (document reference 5.1 of the Application).

### 1.2.1 Pre-Application

7. The Applicant has engaged with the MMO regarding the project during the pre-Application process, both in terms of informal non-statutory engagement and formal consultation carried out pursuant to Section 42 of the Planning Act 2008.
8. During formal (Section 42) consultation, the MMO provided comments on the Preliminary Environmental Information Report (PEIR) by way of a letter dated 11<sup>th</sup> December 2017.
9. Further to the statutory Section 42 consultation, several meetings were held with the MMO through the Evidence Plan Process.
10. Sections 2.1 to 2.9 provide an overview of meetings and correspondence undertaken with the MMO. Minutes of the meetings are provided in Appendices 9.15 to 9.26 (pre-Section 42) and Appendices 25.1 to 25.9 (post-Section 42) of the Consultation Report (document reference 5.1 of the Application).
11. A summary of the consultation between the Applicant and the MMO is provided in Sections 2.1 to 2.6 below.

### 1.2.2 Post-Application

12. As part of the pre-examination process, the MMO submitted a Relevant Representation to the Planning Inspectorate on the 14<sup>th</sup> September 2018 (discussed further in Appendix 1). The MMO has also engaged throughout the Examination deadlines and Issue Specific Hearings.
13. This SoCG will be a live document throughout the examination process as the Applicant and MMO work to resolve outstanding issues.

## 2 STATEMENT OF COMMON GROUND

14. Within the sections and tables below, the different topics and areas of agreement and disagreement between the MMO and the Applicant are set out.

### 2.1 Marine Geology, Oceanography and Physical Processes

15. The project has the potential to impact upon Marine Geology, Oceanography and Physical Processes. Chapter 8 of the Norfolk Vanguard Environmental Statement (ES) (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.

16. Table 1 provides an overview of meetings and correspondence undertaken with the MMO regarding Marine Geology, Oceanography and Physical Processes.

17. Table 2 provides areas of agreement (common ground) and disagreement regarding Marine Geology, Oceanography and Physical Processes.

18. Minutes of Evidence Plan meetings can be found in Appendix 9.16 and Appendix 25.6 of the Consultation Report (document reference 5.1 of the Application).

**Table 1 Summary of Consultation with the MMO regarding Marine Geology, Oceanography and Physical Processes**

Date	Contact Type	Topic
<b>Pre-Application</b>		
21 <sup>st</sup> March 2016	Benthic and Geophysical Survey Scope Meeting	Discussion on the required scope of the geophysical surveys to inform the approach to the offshore surveys conducted in Summer/Autumn 2016 (see Appendix 9.16 of the Consultation Report).
2 <sup>nd</sup> February 2017	Email from the Applicant	Provision of the Marine Physical Processes Method Statement (see Appendix 9.2 of the Consultation Report).
16 <sup>th</sup> February 2017	Benthic and Intertidal Ecology, Fish Ecology, Marine Physical Processes and Marine Water and Sediment Quality Scoping Expert Topic Group Meeting	Discussion of Scoping responses and approach to Environmental Impact Assessment (EIA) and Habitats Regulations Assessment (HRA) (see Appendix 9.16 of the Consultation Report).
22 <sup>nd</sup> June 2017	Email from the Applicant	Offshore HRA Screening (Appendix 5.1 of the HRA (document 5.3)) provided for consultation.
22 <sup>nd</sup> June 2017	Email from the Applicant	Provision of draft Preliminary Environmental Information Report (PEIR) documents (Chapter 8 and Appendix 10.1 of the ES (Fugro survey report) to inform discussions at the Norfolk Vanguard Benthic Ecology



Date	Contact Type	Topic
		and Marine Physical Processes Expert Topic Group meeting.
5 <sup>th</sup> July 2017	Benthic and Intertidal Ecology and Marine Physical Processes PEI Expert Topic Group (ETG) Meeting	Discussion of HRA Screening (see Appendix 9.16 of the Consultation Report).
6 <sup>th</sup> July 2017	Email from the MMO	Response to an early draft of the Marine Physical Processes PEIR chapter.
16 <sup>th</sup> January 2018	Email from the Applicant	Provision of the following draft technical reports to support the Information to Support HRA report: <ul style="list-style-type: none"> <li>• Appendix 7.1 ABPmer Sandwave study; and</li> <li>• Appendix 7.2 Envision Sabellaria data review</li> </ul>
31 <sup>st</sup> January 2018	Marine Physical Processes and Benthic Ecology HRA ETG meeting	PEIR feedback and comments on approach to HRA (see Appendix 25.6 of the Consultation Report).
22 <sup>nd</sup> February 2018	Email from the Applicant	Provision of draft Norfolk Vanguard Information to Support Habitats Regulations Assessment (HRA) report.
21 <sup>st</sup> March 2018	Email from the MMO	MMO's feedback on the HRA.
<b>Post-Application</b>		
14 <sup>th</sup> September 2018	Relevant Representation	The MMO's initial feedback on the DCO application.
16 <sup>th</sup> January 2019	Deadline 1 Submission	The MMO's response to the Applicant's Change Request to the Application and Errata for Environmental Statement
16 <sup>th</sup> January 2019	Deadline 1 Submission	Responses to the Examining Authority's First Round of Written Questions
14 <sup>th</sup> February 2019	Deadline 3 Submission	Oral cases made during ISHs
1 <sup>st</sup> March 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant
14 <sup>th</sup> March 2019	Deadline 4 Submission	Response to Examining Authorities Further Written Questions
21 <sup>st</sup> March 2019	Deadline 5 Submission	Response to Examining Authorities Further Written Questions
3 <sup>rd</sup> April 2019.	Email from the Applicant	Provision of the draft Outline Haisborough, Hammond and Winterton Special Area of Conservation (SAC) Site Integrity Plan (SIP)

Date	Contact Type	Topic
9 <sup>th</sup> April 2019	Deadline 6 Submission	Oral cases made during ISHs
11 <sup>th</sup> April 2019	Meeting (by conference call)	Discuss feedback regarding the draft Outline Haisborough, Hammond and Winterton SAC SIP
23 <sup>rd</sup> April 2019	Email from the MMO	Written feedback regarding the draft Outline Haisborough, Hammond and Winterton SAC SIP
30 <sup>th</sup> April 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant

**Table 2 Statement of Common Ground - Marine Geology, Oceanography and Physical Processes**

Topic	Norfolk Vanguard Limited position	MMO position	Final position
<b>Environmental Impact Assessment</b>			
Existing Environment	Survey data collected for Norfolk Vanguard for the characterisation of Marine Geology, Oceanography and Physical Processes are suitable for the assessment and as agreed in March 2016.	Agreed	It is agreed by both parties that the surveys undertaken were appropriate to inform the assessment.
	The ES adequately characterises the baseline environment in terms of Marine Geology, Oceanography and Physical Processes. A clarification note will be provided in response to potential discrepancies the MMO identifies in their relevant representation.	Agreed	Agreed
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to Marine Geology, Oceanography and Physical Processes has been used. Additional information on how Norfolk Vanguard relates to the objectives of the Marine Policy Statement and the East Inshore and East Offshore marine plans will be provided in a clarification note to accompany the SoCG.	The MMO welcome the clarification note to accompany the SoCG. The document provided demonstrates how the project complies with the East marine plans, the MMO believes would assist the ExA in consideration in regards to art.58 of MCAA (2009) and art.104(2)(aa) of the Planning Act 2008.	Agreed
	The list of potential impacts assessed for Marine Geology, Oceanography and Physical Processes is appropriate.	Under discussion on the basis of the Relevant Representation, as shown in Appendix 1 - MMO is still awaiting technical advice to inform its position. This is in relation to comment 3.1.6 of the RR.	To be confirmed

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	<p>The impact assessment methodologies used provide an appropriate approach to assessing potential impacts of the proposed project. This includes:</p> <ul style="list-style-type: none"> <li>• The assessment using expert judgement based upon knowledge of the OWF sites and available contextual information (Zonal and East Anglia ONE studies and modelling) – therefore no new modelling (e.g. sediment plumes or deposition) was undertaken for the assessment</li> <li>• The definitions used for sensitivity and magnitude in the impact assessment are appropriate.</li> </ul> <p>These methodologies are in line with the Method Statement provided in February 2017 (see Appendix 9.2 of the Consultation Report (Application document 5.1) and as discussed during expert topic group meetings, including the provision of additional justification as requested by the Centre for Environment, Fisheries and Aquaculture Science (Cefas) for the PEIR.</p>	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.
	The worst case scenario used in the assessment for Marine Geology, Oceanography and Physical Processes is appropriate.	Agreed	It is agreed by both parties that a conservative worst case scenario has been assessed.
	As discussed in the Change Report (document reference Pre-ExA;Change Report;9.3), the increase in the maximum number of piles per offshore electrical platform from six to 18 (36 in total for two platforms) does not affect the conclusions of ES Chapter 8 Marine Geology, Oceanography and Physical Processes.	Agreed, The MMO provided comments in Deadline 1 response.	Agreed
Assessment findings	The characterisation of sensitivity for Marine Geology, Oceanography and Physical Processes	Agreed	It is agreed by both parties that the classification of receptor sensitivity is

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	receptors (i.e. the East Anglian Coast and relevant designated sites) is appropriate. .		appropriate following the clarifications provided in the tracker.
	The magnitude of effect is correctly identified.	Agreed	It is agreed by both parties that the magnitude of effects have been identified appropriately.
	The impact significance conclusions of negligible significance for Norfolk Vanguard alone are appropriate.	Agreed	It is agreed by both parties that the impact significance conclusions are appropriate.
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate and as agreed during the expert topic group meeting in July 2017	Agreed	It is agreed by both parties that the plans and projects included in the CIA are appropriate.
	The CIA methodology is appropriate.	Agreed	It is agreed by both parties that the CIA methodology is appropriate.
	The cumulative impact conclusions of negligible significance are appropriate.  The Applicant acknowledges that Scottish Power Renewables has modelled cumulative hydrodynamic effects for projects within the former East Anglia Zone and that the effects were found to be unmeasurable in any practical sense.	Agreed on the basis of Appendix 1 (comments 3.1.8 to 3.1.9).	It is agreed by both parties that the CIA conclusions are appropriate.
<b>Habitats Regulations Assessment (HRA)</b>			
Screening of Likely Significant Effect (LSE)	The approach to HRA Screening is appropriate. The following site is screened in for further assessment as agreed during the expert topic group meeting in July 2017: <ul style="list-style-type: none"> <li>Haisborough, Hammond and Winterton Special Area of Conservation (SAC)</li> </ul>	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice. A SoCG has been prepared between the Applicant and Natural England (document reference Rep1 -SOCG - 13.1)
Assessment of Adverse Effect on Integrity	The approach to the assessment of adverse effect on integrity is appropriate.	MMO defers to the opinion of the Statutory Nature Conservation	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for

Topic	Norfolk Vanguard Limited position	MMO position	Final position
		Bodies (SNCBs) for conservation advice.	conservation advice. A SoCG has been prepared between the Applicant and Natural England (document reference Rep1 -SOCG - 13.1)
	The physical processes of Annex 1 Sandbanks in the Haisborough, Hammond and Winterton SAC will be unaltered by the installation works and the temporary physical disturbance of the sandbanks from construction and maintenance activities will recover, within a reasonable timeframe.	Agreed, noting that there is limited empirical evidence and sandbank recovery should be monitored (see monitoring below). The MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) on what a 'reasonable timeframe' is and the assessment of adverse effect on integrity.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice within the SAC.
	The small scale of cable protection assessed will not interfere with the physical processes associated with the Annex 1 Sandbanks.	Under discussion on the basis of the Relevant Representation, as shown in Appendix 1.	To be confirmed
	The conclusions of no adverse effect on site integrity in relation to the physical processes of Annex 1 Sandbanks, as presented in the Information to Support HRA report (document 5.3), are appropriate.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.
<b>Mitigation and Management</b>			
Mitigation and Management	Given the impacts of the project, the proposed embedded mitigation outlined in the Schedule of Mitigation (document 6.5) and Section 8.7.4 of ES Chapter 8 is appropriate.	Under discussion on the basis of the Relevant Representation, as shown in Appendix 1.	To be confirmed
Mitigation and Management	Mitigation and Management associated with the Haisborough, Hammond and Winterton SAC is	To be confirmed following review of the submission of the draft	To be confirmed

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	secured through the Haisborough, Hammond and Winterton SAC SIP in accordance with condition 9(1)(m) of the Transmission DMLs (Schedules 11 and 12)	Outline Haisborough, Hammond and Winterton SAC SIP	
Monitoring	<p>As stated in the In Principle Monitoring Plan (IPMP) (document 8.12), swath-bathymetric surveys would be undertaken pre- and post-construction in order to monitor changes in seabed topography, including any changes as a result of sand wave levelling.</p> <p>The IPMP provides an appropriate framework to agree monitoring requirements with the MMO.</p>	<p>Agreed, noting that in view of the limited specific modelling and the reliance on expert interpretation for impact assessment, monitoring should be undertaken to validate the spatial and temporal scale of impacts and the anticipated recovery of (particularly) the designated features of the Haisborough Hammond and Winterton SAC.</p>	<p>It is agreed by both parties that the IPMP provides an appropriate framework to agree monitoring requirements with the MMO subject to any developments/amendments.</p>

## 2.2 Marine Water and Sediment Quality

19. The project has the potential to impact upon Marine Water and Sediment Quality. Chapter 9 of the Norfolk Vanguard ES (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.
20. Table 3 provides an overview of meetings and correspondence undertaken with the MMO regarding Marine Water and Sediment Quality.
21. Table 4 provides areas of agreement (common ground) and disagreement regarding Marine Water and Sediment Quality.
22. Minutes of Evidence Plan meetings can be found in Appendix 9.16 of the Consultation Report (document reference 5.1 of the Application).

**Table 3 Summary of Consultation with the MMO regarding Marine Water and Sediment Quality**

Date	Contact Type	Topic
<b>Pre-Application</b>		
21 <sup>st</sup> March 2016	Benthic and Geophysical Survey Scope Meeting	Discussions on the required scope of the seabed surveys to inform the approach to the offshore surveys in Summer/Autumn 2016.
26 <sup>th</sup> April 2016	Email from the MMO	Comments on contaminant sampling strategy.
2 <sup>nd</sup> February 2017	Email from the Applicant	Provision of the Marine Water Quality and Sediment Quality Method Statement (provided in Appendix 9.2 of the Consultation Report).
16 <sup>th</sup> February 2017	Benthic and Intertidal Ecology, Fish Ecology, Marine Physical Processes and Marine Water and Sediment Quality Scoping Expert Topic Group Meeting	Discussion of Scoping responses and approach to EIA/HRA (see Appendix 9.16 of the Consultation Report).
3 <sup>rd</sup> April 2017	Email from the MMO	Agreement on sediment sampling strategy.
<b>Post-Application</b>		
14 <sup>th</sup> September 2018	Relevant Representation	The MMO's initial feedback on the DCO application



**Table 4 Statement of Common Ground - Marine Water and Sediment Quality**

Topic	Norfolk Vanguard Limited position	MMO position	Final position
<b>Environmental Impact Assessment</b>			
Existing Environment	Survey data collected for Norfolk Vanguard for the characterisation of Marine Water and Sediment Quality are suitable for the assessment and as agreed by email from the MMO on 3 <sup>rd</sup> April 2017.	Agreed	It is agreed by both parties that the surveys undertaken were appropriate to inform the assessment.
	The ES adequately characterises the baseline environment in terms of Marine Water and Sediment Quality.	Agreed	It is agreed by both parties that the existing environment of Marine Water and Sediment Quality has been characterised appropriately for the assessment.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to Marine Water and Sediment Quality has been used. Additional information on how Norfolk Vanguard relates to the objectives of the Marine Policy Statement and the East Inshore and East Offshore marine plans will be provided in a clarification note to accompany the SoCG.	The MMO welcome the clarification note to accompany the SoCG. The document provided demonstrates how the project complies with the East marine plans, the MMO believes would assist the ExA in consideration in regards to art.58 of MCAA (2009) and art.104(2)(aa) of the Planning Act 2008.	Agreed
	The list of potential impacts on Marine Water and Sediment Quality assessed is appropriate.	Agreed, subject to consideration of J-tube and ladder cleaning activities (see below).	Agreed (see below)

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	Cleaning of offshore infrastructure would involve jet washing with seawater and therefore only natural materials would enter the marine environment i.e. marine growth, bird guano and seawater. Whilst it is not possible to quantify the exact volume of the materials to be deposited, due to the small scale of the deposit that will be mixed with seawater, it is considered that such a deposit will quickly dissipate and is not capable of being deposited in sufficient volume to be capable of affecting water quality. No chemicals would be used in this process. The indicative number of operational visits are included as part of the operation and maintenance activities described in Chapter 5, section 5.4.18.	Agreed	It is agreed by both parties that cleaning of offshore infrastructure can be considered as part of the operational visits that are described in Chapter 5, section 5.4.18.
	The impact assessment methodology is appropriate, and is in line with the Method Statement provided in February 2017 (see Appendix 9.2 of the Consultation Report (Application document 5.1) and agreed during the topic group meeting in February 2017.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.
	The worst case scenario used in the assessment for Marine Water and Sediment Quality is appropriate.	Agreed	It is agreed by both parties that a conservative worst case scenario has been assessed.
	As discussed in the Change Report (document reference Pre-ExA;Change Report;9.3), the increase in the maximum number of piles per offshore electrical platform from six to 18 (36 in total for two platforms) does not affect the conclusions of ES Chapter 9 Marine Water and Sediment Quality	Agreed, The MMO provided comments in Deadline 1 response.	Agreed
Assessment findings	The characterisation of receptor sensitivity is appropriate.	Agreed	It is agreed by both parties that the classification of receptor sensitivity is appropriate.
	The magnitude of effect is correctly identified.	Agreed	It is agreed by both parties that the magnitude of effects have been identified appropriately.

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	The impact significance conclusions of negligible or minor adverse significance for Norfolk Vanguard alone are appropriate.	Agreed	It is agreed by both parties that the impact significance conclusions are appropriate.
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate.	Agreed	It is agreed by both parties that the plans and projects included in the CIA are appropriate.
	The CIA methodology is appropriate.	Agreed	It is agreed by both parties that the CIA methodology is appropriate.
	The cumulative impact conclusions of negligible or minor significance are appropriate.	Agreed	It is agreed by both parties that the cumulative impact conclusions of negligible or minor significance are appropriate.
<b>Mitigation and Management</b>			
Mitigation and Management	Given the predicted impacts of the project, the proposed mitigation is adequate.	Agreed	It is agreed by both parties that the proposed mitigation is appropriate.
Monitoring	Given the predicted impacts of the project, no monitoring of marine water and sediment quality is proposed.	Agreed  Given the low contamination levels of sediment (as shown in table 3.3 of the Site Characterisation Report), this is acceptable.	It is agreed by both parties that monitoring of marine water and sediment quality is not required.

### 2.3 Benthic and Intertidal Ecology

23. The project has the potential to impact upon Benthic and Intertidal Ecology. Chapter 10 of the Norfolk Vanguard ES (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.
24. Table 5 provides an overview of meetings and correspondence undertaken with the MMO regarding Benthic and Intertidal Ecology.
25. Table 6 provides areas of agreement (common ground) and disagreement regarding Benthic and Intertidal Ecology.
26. Minutes of Evidence Plan meetings can be found in Appendix 9.16 and Appendix 25.6 of the Consultation Report (document reference 5.1 of the Application).

**Table 5 Summary of Consultation with the MMO regarding Benthic and Intertidal Ecology**

Date	Contact Type	Topic
<b>Pre-Application</b>		
21 <sup>st</sup> March 2016	Benthic and Geophysical Survey Scope Meeting	Discussion on the required scope of the benthic surveys to inform the approach to the offshore surveys conducted in Summer/Autumn 2016 (see Appendix 9.16 of the Consultation Report).
13th April 2016	Email from the MMO	Feedback on benthic survey methodology.
8th June 2016	Email from the MMO	Agreement on proposed benthic survey area.
2 <sup>nd</sup> February 2017	Email from the Applicant	Provision of the Benthic Ecology Method Statement (see Appendix 9.2 of the Consultation Report).
16 <sup>th</sup> February 2017	Benthic and Intertidal Ecology, Fish Ecology, Marine Physical Processes and Marine Water and Sediment Quality Scoping Expert Topic Group Meeting	Discussion of Scoping responses and approach to EIA/HRA (see Appendix 9.16 of the Consultation Report).
22 <sup>nd</sup> June 2017	Email from the Applicant	Offshore HRA Screening (Appendix 5.1 of the Information to Support HRA report) provided for consultation.
22 <sup>nd</sup> June 2017	Email from the Applicant	Provision of draft documents (Chapter 8 of the PEIR and Appendix 10.1 of the ES (Fugro survey report)) to inform discussions at the Norfolk Vanguard Benthic Ecology and Marine Physical Processes Expert Topic Group meeting.
5 <sup>th</sup> July 2017	Benthic and Intertidal Ecology and Marine Physical Processes PEI ETG Meeting	Discussion of HRA Screening. (See Appendix 9.16 of the Consultation Report).

Date	Contact Type	Topic
16 <sup>th</sup> January 2018	Email from the Applicant	Provision of the following draft technical reports to support the Information to Support HRA report: <ul style="list-style-type: none"> <li>• Appendix 7.1 ABPmer Sandwave study; and</li> <li>• Appendix 7.2 Envision Sabellaria data review</li> </ul>
31 <sup>st</sup> January 2018	Marine Physical Processes and Benthic Ecology HRA ETG meeting	PEIR feedback and comments on approach to HRA (see Appendix 25.6 of the Consultation Report).
22 <sup>nd</sup> February 2018	Email from the Applicant	Provision of draft Norfolk Vanguard Information to Support Habitats Regulations Assessment (HRA) (document 5.3).
21 <sup>st</sup> March 2018	Email from the MMO	MMO's feedback on the HRA.
<b>Post-Application</b>		
14 <sup>th</sup> September 2018	Relevant Representation	The MMO's initial feedback on the DCO application.
16 <sup>th</sup> January 2019	Deadline 1 Submission	The MMO's response to the Applicant's Change Request to the Application and Errata for Environmental Statement
16 <sup>th</sup> January 2019	Deadline 1 Submission	Responses to the Examining Authority's First Round of Written Questions
14 <sup>th</sup> February 2019	Deadline 3 Submission	Oral cases made during ISHs
1 <sup>st</sup> March 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant
14 <sup>th</sup> March 2019	Deadline 4 Submission	Response to Examining Authorities Further Written Questions
21 <sup>st</sup> March 2019	Deadline 5 Submission	Response to Examining Authorities Further Written Questions
3 <sup>rd</sup> April 2019.	Email from the Applicant	Provision of the draft Outline Haisborough, Hammond and Winterton Special Area of Conservation (SAC) Site Integrity Plan (SIP)
9 <sup>th</sup> April 2019	Deadline 6 Submission	Oral cases made during ISHs
11 <sup>th</sup> April 2019	Meeting (by conference call)	Discuss feedback regarding the draft Outline Haisborough, Hammond and Winterton SAC SIP
23 <sup>rd</sup> April 2019	Email from the MMO	Written feedback regarding the draft Outline Haisborough, Hammond and Winterton SAC SIP
30 <sup>th</sup> April 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant

**Table 6 Statement of Common Ground - Benthic and Intertidal Ecology**

Topic	Norfolk Vanguard Limited position	MMO position	Final position
<b>Environmental Impact Assessment</b>			
Existing Environment	Survey data collected for Norfolk Vanguard for the characterisation of Benthic and Intertidal Ecology are suitable for the assessment and as agreed in the survey planning meeting March 2016 and the expert topic group meeting in February 2017.	Agreed	It is agreed by both parties that the surveys undertaken were appropriate to inform the assessment.
	The ES adequately characterises the baseline environment in terms of Benthic and Intertidal Ecology	Agreed	It is agreed by both parties that the existing environment of Benthic Ecology has been characterised appropriately for the assessment.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to Benthic and Intertidal Ecology has been used. Additional information on how Norfolk Vanguard relates to the objectives of the Marine Policy Statement and the East Inshore and East Offshore marine plans will be provided in a clarification note to accompany the SoCG.	The MMO welcome the clarification note to accompany the SoCG. The document provided demonstrates how the project complies with the East marine plans, the MMO believes would assist the ExA in consideration in regards to art.58 of MCAA (2009) and art.104(2)(aa) of the Planning Act 2008.	Agreed
	The list of potential impacts on Benthic and Intertidal Ecology assessed is appropriate.	Agreed	Agreed
	The impact assessment methodology is appropriate, and is in line with the Method Statement provided in February 2017 (see Appendix 9.2 of the Consultation Report (Application document 5.1) and agreed during the topic group meeting in February 2017.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	The worst case scenario used in the assessment for Benthic and Intertidal Ecology is appropriate.	Agreed	It is agreed by both parties that the worst case scenario used in the assessment is appropriate.
	As discussed in the Change Report (document reference Pre-ExA;Change Report;9.3), the increase in the maximum number of piles per offshore electrical platform from six to 18 (36 in total for two platforms) does not affect the conclusions of ES Chapter 10 Benthic Ecology.	Agreed, The MMO provided comments in Deadline 1 response.	Agreed
Assessment findings	The characterisation of receptor sensitivity is appropriate.	Agreed	It is agreed by both parties that the classification of receptor sensitivity is appropriate.
	The magnitude of effect is correctly identified.	Agreed	It is agreed by both parties that the magnitude of effects have been identified appropriately
	The impact significance conclusions of negligible or minor adverse for Norfolk Vanguard alone are appropriate.	Agreed	It is agreed by both parties that the impact significance conclusions are appropriate.
	The communities of Annex 1 Sandbanks in the Haisborough, Hammond and Winterton SAC will recover as the communities are habituated to highly mobile sediments.	Agreed, noting that MMO would defer to the SNCBs for advice on whether recovery will occur within a 'reasonable' timeframe for the purposes of the HRA.	It is agreed by both parties that the communities of Annex 1 Sandbanks in the Haisborough, Hammond and Winterton SAC will recover as the communities are habituated to highly mobile sediments, noting that MMO would defer to the SNCBs for advice on whether recovery will occur within a 'reasonable' timeframe for the purposes of the HRA.
	<i>Sabellaria spinulosa</i> is ephemeral and is expected to recover/recolonise following temporary physical during construction in the unlikely event that micrositing of the offshore cable is not possible. Effects on <i>S. spinulosa</i> in the Haisborough, Hammond and Winterton SAC are addressed through the Outline Haisborough, Hammond and Winterton SAC SIP	Under discussion on the basis of the Relevant Representation, as shown in Appendix 1.	To be confirmed

Topic	Norfolk Vanguard Limited position	MMO position	Final position
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate as agreed during the expert topic group meeting in July 2017.	Agreed	It is agreed by both parties that the plans and projects considered within the CIA are appropriate.
	The CIA methodology is appropriate.	Agreed	It is agreed by both parties that the CIA methodology is appropriate.
	The cumulative impact conclusions of negligible or minor significance are appropriate.	Agreed	It is agreed by both parties that the conclusions of the CIA are appropriate.
<b>Habitats Regulations Assessment (HRA)</b>			
Screening of LSE	The approach to HRA Screening is appropriate. The following site is screened in for further assessment as agreed during the expert topic group meeting in July 2017: <ul style="list-style-type: none"> <li>Haisborough, Hammond and Winterton SAC</li> </ul>	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.
Assessment of Adverse Effect on Integrity	The approach to the assessment of adverse effect on integrity is appropriate.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.
	The conclusions of no adverse effect on site integrity in the Information to Support HRA report (document 5.3) are appropriate.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.
<b>Mitigation and Management</b>			



Topic	Norfolk Vanguard Limited position	MMO position	Final position
Mitigation and Management	Given the impacts of the project, the proposed mitigation outlined in the Schedule of Mitigation (document 6.5) and Section 10.7.1 of ES Chapter 10 is appropriate.	Under discussion on the basis of the Relevant Representation, as shown in Appendix 1.	To be confirmed
Mitigation and Management	Mitigation and Management associated with the Haisborough, Hammond and Winterton SAC is secured through the Haisborough, Hammond and Winterton SAC SIP in accordance with condition 9(1)(m) of the Transmission DMLs (Schedules 11 and 12)	To be confirmed following review of the submission of the draft Outline Haisborough, Hammond and Winterton SAC SIP	To be confirmed
Monitoring	The IPMP (document 8.12), provides an appropriate framework to agree monitoring with the MMO in consultation with Natural England.	Agreed	It is agreed by both parties that the IPMP (document 8.12), provides an appropriate framework to agree monitoring with the MMO in consultation with Natural England
	It is acknowledged that the 'Review of environmental data associated with post-consent monitoring of licence conditions of offshore wind farms, 2014' were inconclusive and based on round 1 wind farms which are not comparable in size to Norfolk Vanguard. The Applicant proposes that targeted monitoring of important Annex 1 habitats would be proportionate and provide appropriate information for Norfolk Vanguard.	Under discussion on the basis of the Relevant Representation, as shown in Appendix 1.	To be confirmed

## 2.4 Fish and Shellfish Ecology

27. The project has the potential to impact upon Fish and Shellfish Ecology. Chapter 11 of the Norfolk Vanguard ES (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.
28. Table 7 provides an overview of meetings and correspondence undertaken with the MMO regarding Fish and Shellfish Ecology.
29. Table 8 provides areas of agreement (common ground) and disagreement regarding Fish and Shellfish Ecology.
30. Minutes of Evidence Plan meetings can be found in Appendix 9.16 of the Consultation Report (document reference 5.1 of the Application).

**Table 7 Summary of Consultation with the MMO regarding Fish and Shellfish Ecology**

Date	Contact Type	Topic
<b>Pre-Application</b>		
21 <sup>st</sup> March 2016	Benthic and Geophysical Survey Scope Meeting	Agreement that no further fish surveys were required to inform the EIA.
2 <sup>nd</sup> February 2017	Email from the Applicant	Provision of the Fish Ecology Method Statement (see Appendix 9.2 of the Consultation Report).
16 <sup>th</sup> February 2017	Benthic and Intertidal Ecology, Fish Ecology, Marine Physical Processes and Marine Water and Sediment Quality Scoping Expert Topic Group Meeting	Discussion of Scoping responses and approach to EIA/HRA (minutes provided in Appendix 9.16 of the Consultation Report).
<b>Post-Application</b>		
14 <sup>th</sup> September 2018	Relevant Representation	The MMO's initial feedback on the DCO application.
16 <sup>th</sup> January 2019	Deadline 1 Submission	The MMO's response to the Applicant's Change Request to the Application and Errata for Environmental Statement
16 <sup>th</sup> January 2019	Deadline 1 Submission	Responses to the Examining Authority's First Round of Written Questions
14 <sup>th</sup> February 2019	Deadline 3 Submission	Oral cases made during ISHs
1 <sup>st</sup> March 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant
14 <sup>th</sup> March 2019	Deadline 4 Submission	Response to Examining Authorities Further Written Questions

Date	Contact Type	Topic
21st March 2019	Deadline 5 Submission	Response to Examining Authorities Further Written Questions
9th April 2019	Deadline 6 Submission	Oral cases made during ISHs
30th April 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant

**Table 8 Statement of Common Ground - Fish and Shellfish Ecology**

Topic	Norfolk Vanguard Limited position	MMO position	Final position
<b>Environmental Impact Assessment</b>			
Existing Environment	<p>The ES adequately characterises the baseline environment in terms of Fish and Shellfish Ecology.</p> <p>No site specific survey data is required for the characterisation of Fish and Shellfish Ecology as agreed by email on 13<sup>th</sup> April 2016.</p>	Agreed	It is agreed by both parties that the existing environment for fish and shellfish has been characterised appropriately for the assessment.
Assessment methodology	<p>Appropriate legislation, planning policy and guidance relevant to Fish and Shellfish Ecology has been used. Additional information on how Norfolk Vanguard relates to the objectives of the Marine Policy Statement and the East Inshore and East Offshore marine plans will be provided in a clarification note to accompany the SoCG.</p>	<p>The MMO welcome the clarification note to accompany the SoCG. The document provided demonstrates how the project complies with the East marine plans, the MMO believes would assist the ExA in consideration in regards to art.58 of MCAA (2009) and art.104(2)(aa) of the Planning Act 2008.</p>	Agreed
	<p>The list of potential impacts on Fish and Shellfish Ecology assessed is appropriate.</p>	Agreed	It is agreed by both parties that appropriate impacts on fish and shellfish have been assessed.
	<p>The impact assessment methodology is appropriate, and is in line with the Method Statement provided in February 2017 (see Appendix 9.2 of the Consultation Report (Application document 5.1) and agreed during the topic group meeting in February 2017.</p>	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.
	<p>The approach to assessment of impacts from pile driving noise on fish follows current best practice and is therefore appropriate for this assessment, as</p>	<p>The MMO are satisfied with the assessment of impacts on fish. The MMO believe the distance from</p>	Agreed

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	<p>agreed with Cefas during the expert topic group meeting in February 2017.</p> <p>Underwater noise monitoring will be undertaken as required by condition 19(1) of the Generation Deemed Marine Licence (DML)s.</p>	<p>herring spawning areas is sufficient that there is unlikely to be significant difference in the impacts to justify use of a stationary model.</p> <p>The MNO note modelling has been based on available data for 7 MW turbines assuming that the trends would continue to the larger piles of up to 15 m diameter under consideration for the monopiles.</p> <p>The MMO agrees that the IPMP proposes to compare the measured data, from the first four piles of each type (e.g. monopile or pin-pile), with predictions for received levels and source levels that were made in the ES. In the event that any monitored noise levels exceed the predicted levels or impact ranges assessed in the ES, the impact ranges would need to be reconsidered.</p>	
	<p>The worst case scenario used in the assessment for Fish and Shellfish Ecology is appropriate.</p>	<p>Agreed</p>	<p>It is agreed by both parties that the worst case scenario used in the assessment is appropriate.</p>
	<p>As discussed in the Change Report (document reference Pre-ExA;Change Report;9.3), the increase in the maximum number of piles per offshore electrical platform from six to 18 per platform (36</p>	<p>Agreed, The MMO provided comments in Deadline 1 response.</p>	<p>Agreed</p>

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	in total for two platforms) does not affect the conclusions of ES Chapter 11 Fish and Shellfish Ecology.		
Assessment findings	The characterisation of receptor sensitivity is appropriate.	The MMO are satisfied with the assessment of impacts on fish. The MMO believe the distance from herring spawning areas is sufficient that there is unlikely to be significant difference in the impacts to justify use of a stationary model.	Agreed
	The magnitude of effect is correctly identified.	Agreed	It is agreed by both parties that the magnitude of effects on fish and shellfish are appropriately characterised.
	The impact significance conclusions of negligible or minor adverse for Norfolk Vanguard alone are appropriate.	Agreed	It is agreed by both parties that the impact significance for fish and shellfish is appropriately characterised for Norfolk Vanguard alone.
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate.	Agreed	It is agreed by both parties that the plans and projects included in the CIA are appropriate.
	The CIA methodology is appropriate.	Agreed	It is agreed by both parties that the CIA methodology is appropriate.
	The cumulative impact conclusions of negligible or minor significance are appropriate.	Agreed	It is agreed by both parties that the impact significance for fish and shellfish is appropriate for cumulative impacts.
<b>Mitigation and Management</b>			
Mitigation and Management	Given the impacts of the project, the proposed mitigation outlined in the Schedule of Mitigation (document 6.5)	Agreed	It is agreed by both parties that the embedded mitigation proposed is appropriate.

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	and Section 11.7.1 of ES Chapter 11 is appropriate.		
Monitoring	The IPMP (document reference 8.12) provides an appropriate framework for agreeing monitoring. No intrusive surveys for fish and shellfish are proposed.	<p>Agreed subject to review of the updated IPMP at Deadline 7</p> <p>Where monitoring surveys are undertaken, the gear used in commercial fishing operations for the target species in question should be used.</p>	<p>It is agreed by both parties that monitoring of fish and shellfish is not required.</p> <p>Proposed mitigation for any reporting/adaptive management measures in the event monitored noise levels exceed the predicted levels is under discussion.</p>

## 2.5 Commercial Fisheries

31. The project has the potential to impact upon Commercial Fisheries. Chapter 14 of the Norfolk Vanguard ES (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.
32. Table 9 provides an overview of meetings and correspondence undertaken with the MMO regarding Commercial Fisheries.
33. Table 10 provides areas of agreement (common ground) and disagreement regarding Commercial Fisheries.

**Table 9 Summary of Consultation with the MMO regarding Commercial Fisheries**

Date	Contact Type	Topic
<b>Pre-Application</b>		
November 2016	Scoping Opinion	Feedback on data sources and consultation with the fishing industry.
December 2017	PEIR response	Feedback on the PEIR chapter.
<b>Post-Application</b>		
14 <sup>th</sup> September 2018	Relevant Representation	The MMO's initial feedback on the DCO application.
16 <sup>th</sup> January 2019	Deadline 1 Submission	The MMO's response to the Applicant's Change Request to the Application and Errata for Environmental Statement
16 <sup>th</sup> January 2019	Deadline 1 Submission	Responses to the Examining Authority's First Round of Written Questions
14 <sup>th</sup> February 2019	Deadline 3 Submission	Oral cases made during ISHs
1 <sup>st</sup> March 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant
14 <sup>th</sup> March 2019	Deadline 4 Submission	Response to Examining Authorities Further Written Questions
21 <sup>st</sup> March 2019	Deadline 5 Submission	Response to Examining Authorities Further Written Questions
9 <sup>th</sup> April 2019	Deadline 6 Submission	Oral cases made during ISHs
30 <sup>th</sup> April 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant



**Table 10 Statement of Common Ground – Commercial Fisheries**

Topic	Norfolk Vanguard Limited position	MMO position	Final position
<b>Environmental Impact Assessment</b>			
Existing Environment	The ES adequately characterises the baseline environment in terms of Commercial Fisheries.	Agreed	It is agreed by both parties that the existing environment for commercial fisheries has been characterised appropriately for the assessment.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to Commercial Fisheries has been considered. Additional information on how Norfolk Vanguard relates to the objectives of the Marine Policy Statement and the East Inshore and East Offshore marine plans will be provided in a clarification note to accompany the SoCG.	The MMO welcome the clarification note to accompany the SoCG. The document provided demonstrates how the project complies with the East marine plans, the MMO believes would assist the ExA in consideration in regards to art.58 of MCAA (2009) and art.104(2)(aa) of the Planning Act 2008.	Agreed
	The list of potential impacts on Commercial Fisheries assessed is appropriate.	Agreed	It is agreed by both parties that appropriate impacts on commercial fisheries have been assessed.
	The worst case scenario used in the assessment for Commercial Fisheries is appropriate.	Agreed	It is agreed by both parties that the worst case scenario used in the assessment is appropriate
Assessment findings	The characterisation of receptor sensitivity is appropriate.	Agreed	It is agreed by both parties that sensitivity of commercial fisheries receptors is appropriately characterised.
	The magnitude of effect is correctly identified.	Agreed	It is agreed by both parties that the magnitude of effects on commercial fisheries is appropriately characterised.

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	The impact significance conclusions of negligible or minor adverse for Norfolk Vanguard alone are appropriate.	Agreed	It is agreed by both parties that the impact significance commercial fisheries is appropriately characterised for Norfolk Vanguard alone.
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate.	Agreed	It is agreed by both parties that the plans and projects included in the CIA are appropriate.
	The CIA methodology is appropriate.	Agreed	It is agreed by both parties that the CIA methodology is appropriate.
	The cumulative impact conclusions of negligible or minor significance are appropriate.	Agreed	It is agreed by both parties that the impact significance for commercial fisheries is appropriate for cumulative impacts.
<b>Mitigation and Management</b>			
Mitigation and Management	<p>Given the impacts of the project, the proposed mitigation outlined in the Schedule of Mitigation (document 6.5) and Section 14.7.1 of ES Chapter 14 is appropriate.</p> <p>A Fisheries Liaison and Co-existence Plan (as required under the DCO Schedules 9 and 10 Part 4 Condition 14(1)(d)(v) and Schedules 11 and 12 Part 4 Condition 9(1)(d)(v)) will provide the framework for agreeing mitigation with relevant fisheries stakeholders. An Outline of this plan is currently being prepared by the Applicant and is proposed to be submitted during the Examination Process. Furthermore, as required under DCO Schedules 9 and 10 Part 4 Condition 14(1)(d)(iv) and Schedules 11 and 12 Part 4 Condition 9(1)(d)(iv), a Fisheries</p>	<p>Agreed subject to amendments/developments throughout the examination.</p> <p>The MMO would note that the MMO will not act as arbitrator in regard to compensation and will not be involved in discussions on the need for or amount compensation being issued. This needs to be made clear within the Outline Fisheries Liaison and Coexistence Plan.</p>	Agreed

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	<p>Liaison Officer (FLO) will also be appointed for the construction and operational phases of the project.</p> <p>Where there is likely to be a demonstrable impact on commercial fishing individual agreements will be reached as necessary, with any agreements based on evidence and track record and in accordance with Fishing Liaison with Offshore Wind and Wet Renewables (FLOWW). Best Practice Guidance for Offshore Renewables Developments.</p>		
Monitoring	<p>The IPMP (document reference 8.12) provides an appropriate framework for agreeing monitoring. No intrusive surveys for commercial fisheries are proposed. Of specific relevance to commercial fisheries is the monitoring of cable burial which will be undertaken which will be presented in the cable specification, installation and monitoring plan as required under condition 14(g) of the DMLs.</p>	Agreed	<p>It is agreed by both parties that the IPMP provides an appropriate framework for agreeing monitoring.</p>

## 2.6 Marine Mammals

34. The project has the potential to impact upon Marine Mammals. Chapter 12 of the Norfolk Vanguard ES (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.
35. The MMO defer to Natural England on most aspects of the marine mammal assessment and therefore this SOCG should be reviewed in parallel with the Natural England SOCG (document Rep1 – SOCG – 13.1).
36. Table 11 provides an overview of meetings and correspondence regarding marine mammals undertaken with the MMO (or Cefas as their advisor on underwater noise).
37. Table 12 provides areas of agreement (common ground) and disagreement regarding Marine Mammals.
38. Minutes of Evidence Plan meetings can be found in Appendix 9.24 and Appendix 25.9 of the Consultation Report (document reference 5.1 of the Application).

**Table 11 Summary of Consultation with the MMO regarding Marine Mammals**

Date	Contact Type	Topic
<b>Pre-Application</b>		
2 <sup>nd</sup> February 2017	Email from the Applicant	Provision of the Marine Mammals Method Statement (Appendix 9.13 of the Consultation Report).
22 <sup>nd</sup> June 2017	Email from the Applicant	Offshore HRA Screening (Appendix 5.1 of the Information to Support HRA report) provided for consultation.
22 <sup>nd</sup> June 2017	Email from the Applicant	Provision of HRA Method Statement (Appendix 9.13 of the Consultation Report) to inform discussions at the Marine Mammals Topic Group meeting.
22 <sup>nd</sup> February 2018	Email from the Applicant	Provision of draft Norfolk Vanguard Information to Support HRA report.
26 <sup>th</sup> March 2018	Marine Mammal ETG Conference Call	Discussion of feedback on the draft Information to Support HRA for Marine Mammals (see Appendix 25.9 of the Consultation Report).
13 <sup>th</sup> April 2018	Email from the Applicant	Provision of draft In Principle Southern North Sea cSAC Site Integrity Plan for review.
26 <sup>th</sup> April 2018	Conference call	Discussion of Site Integrity Plan
<b>Post-Application</b>		
14 <sup>th</sup> September 2018	Relevant Representation	The MMO's initial feedback on the DCO application.
16 <sup>th</sup> January 2019	Deadline 1 Submission	The MMO's response to the Applicant's Change Request to the Application and Errata for Environmental Statement

Date	Contact Type	Topic
16 <sup>th</sup> January 2019	Deadline 1 Submission	Responses to the Examining Authority's First Round of Written Questions
14 <sup>th</sup> February 2019	Deadline 3 Submission	Oral cases made during ISHs
1 <sup>st</sup> March 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant
14 <sup>th</sup> March 2019	Deadline 4 Submission	Response to Examining Authorities Further Written Questions
21 <sup>st</sup> March 2019	Deadline 5 Submission	Response to Examining Authorities Further Written Questions
9 <sup>th</sup> April 2019	Deadline 6 Submission	Oral cases made during ISHs
30 <sup>th</sup> April 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant

**Table 12 Statement of Common Ground - Marine mammals**

Topic	Norfolk Vanguard Limited position	MMO position	Final position
<b>Environmental Impact Assessment</b>			
Existing Environment	Survey data collected for Norfolk Vanguard for the characterisation of marine mammals are suitable for the assessment.	Agreed	It is agreed by both parties the surveys undertaken were appropriate to inform the assessment.
	The ES adequately characterises the baseline environment in terms of marine mammals.	Agreed	It is agreed by both parties that the existing environment for marine mammals has been characterised appropriately for the assessment.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to marine mammals has been used.  Additional information on how Norfolk Vanguard relates to the objectives of the Marine Policy Statement and the East Inshore and East Offshore marine plans will be provided in a clarification note to accompany the SoCG.	The MMO welcome the clarification note to accompany the SoCG. The document provided demonstrates how the project complies with the East marine plans, the MMO believes would assist the ExA in consideration in regards to art.58 of MCAA (2009) and art.104(2)(aa) of the Planning Act 2008.	Agreed
	The list of potential impacts on marine mammals assessed is appropriate.	Agreed	It is agreed by both parties that appropriate impacts on marine mammals have been assessed.
	Harbour porpoise, grey seal and harbour seal are the appropriate species of marine mammal to be considered in the impact assessment.	Agreed	It is agreed by both parties that appropriate species of marine mammal have been assessed.
	The reference populations as defined in the ES are appropriate.	Deferred to Natural England	

Topic	Norfolk Vanguard Limited position	MMO position	Final position
	The approach to underwater noise modelling and assessment of impacts from pile driving noise for marine mammals follows current best practice and is therefore appropriate for this assessment as agreed with Cefas during the expert topic group meeting in February 2017.	Agreed	It is agreed by both parties that the approach to underwater noise impact assessment is appropriate
	The impact assessment methodology is appropriate.	Agreed	It is agreed by both parties that the impact assessment methodology is appropriate
	The worst case scenario used in the assessment for marine mammals is appropriate.	Agreed	It is agreed by both parties that the worst case scenario used in the assessment is appropriate
	As discussed in the Change Report (document reference Pre-ExA;Change Report;9.3), the increase in the maximum number of piles per offshore electrical platform from six to 18 (36 in total for two platforms) does not affect the conclusions of ES Chapter 12 Marine Mammals.	Agreed, The MMO provided comments in Deadline 1 response.	Agreed
Assessment findings	The characterisation of receptor sensitivity is appropriate.	Deferred to Natural England	
	The magnitude of effect is correctly identified.	Deferred to Natural England	
	The impact significance conclusions of negligible or minor for Norfolk Vanguard alone are appropriate.	Deferred to Natural England	
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate.	Agreed	It is agreed by both parties that the plans and projects included in the CIA are appropriate.
	The CIA methodology is appropriate.	Agreed	It is agreed by both parties that the CIA methodology is appropriate.
	The cumulative impact conclusions of negligible or minor significance are appropriate.	Agreed	It is agreed by both parties that the impact significance for marine mammals is appropriate for cumulative impacts.

Topic	Norfolk Vanguard Limited position	MMO position	Final position
<b>Habitats Regulations Assessment (HRA)</b>			
Screening of LSE	<p>The Approach to HRA Screening is appropriate. The following sites are screened in for further assessment:</p> <ul style="list-style-type: none"> <li>• Southern North Sea cSAC/ Site of Community Importance (SCI)</li> <li>• Humber Estuary SAC</li> <li>• The Wash and North Norfolk Coast SAC</li> </ul>	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	It is agreed by both parties that the designated sites and potential effects screened in for further assessment are appropriate.
Assessment of Adverse Effect on Integrity	The approach to the assessment of adverse effect on site integrity is appropriate.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	It is agreed by both parties that the approach to the assessment of potential adverse effects on site integrity presented in the Information to Support HRA report (document 5.3) are appropriate.
	The conclusions of the Information to Support HRA report are appropriate.	MMO defers to the opinion of the Statutory Nature Conservation Bodies (SNCBs) for conservation advice.	It is agreed by both parties that there would be no Adverse Effect on Integrity as a result of Norfolk Vanguard alone.
<b>Mitigation and Management</b>			
Mitigation and Management	<p>The Site Integrity Plan (required under DCO Schedules 9 and 10 Part 4 Condition 14(m) and Schedules 11 and 12 Part 4 condition 9(l), in accordance with the In Principle Site Integrity Plan (application document 8.17), provides an appropriate framework for the management of effects on the Southern North Sea cSAC/SCI.</p> <p>The DCO conditions ensure that any piling activities must not commence until the MMO is satisfied that the Site Integrity Plan provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of the Southern North Sea cSAC/SCI.</p>	In accordance with Section 1.1.1 of the MMO Deadline 6 response, the current requirement for a Southern North Sea SAC SIP is likely to be sufficient to allow any mechanism to be fully incorporated without need for a variation.	Agreed



Topic	Norfolk Vanguard Limited position	MMO position	Final position
	<p>The In Principle Site Integrity Plan provides a summary of potential effects on the Southern North Sea cSAC/SCI, for Norfolk Vanguard alone and in-combination. This will be refined as the project design develops.</p> <p>The In Principle Site Integrity Plan also outlines the measures currently available or likely to be available in the future, which could be applicable to mitigate underwater noise effects associated Norfolk Vanguard. The format of the In Principle Site Integrity Plan followings that accepted, as key mitigation provision, on other recent DCO consent application for Southern North Sea wind farms.</p>		
	<p>The draft Marine Mammal Mitigation Protocol (MMMP) for piling (application document 8.13) provides an appropriate framework to secure appropriate mitigation measures for underwater noise impacts on marine mammals.</p>	Agreed	It is agreed by both parties that the draft Marine Mammal Mitigation Protocol (MMMP) for piling provides an appropriate framework to secure appropriate mitigation measures for underwater noise impacts on marine mammals.
	<p>Unexploded Ordnance (UXO) clearance is considered in the EIA but is not being proposed for inclusion in the DCO. If these activities will be required, they would be subject to additional licensing requirements once the nature and extent of UXO present is known following pre-construction surveys. A specific UXO MMMP would be submitted to MMO in support of such an application.</p>	Agreed, subject to MMO being satisfied that the wording of the DML adequately reflects that UXO clearance is not permitted.	Agreed; subject to MMO being satisfied that the wording of the DML adequately reflects that UXO clearance is not permitted.
Monitoring	<p>The IPMP (document 8.12), provides an appropriate framework to agree monitoring requirements with the MMO.</p>	<p>Agreed</p> <p>The MMO notes that the MMMP will include monitoring where appropriate, and expect that</p>	To be confirmed

Topic	Norfolk Vanguard Limited position	MMO position	Final position
		<p>further details will be provided in due course.</p> <p>Noise monitoring in the IPMP is still under discussion in regards to mitigation to be secured in the event monitored noise levels exceed the predicted levels.</p>	

## 2.7 Offshore Ornithology

39. The MMO defer to Natural England on matters associated with offshore ornithology and were not involved in the Expert Topic Group meetings for this topic.

40. Please see the Natural England SOCG (document Rep 1 – SOCG – 13.1) for further information.

## 2.8 Offshore Archaeology

41. The MMO defer to Historic England on matters associated with offshore archaeology and were not involved in the Expert Topic Group meetings for this topic.

42. Please see the Historic England SOCG (document Rep 1 – SOCG – 8.1) for further information.

## 2.9 DCO and Deemed Marine Licence

43. Table 1 provides an overview of meetings and correspondence undertaken with the MMO regarding the DCO and DMLs.

**Table 13 Summary of Consultation with the MMO regarding the DCO and Deemed Marine Licences**

Date	Contact Type	Topic
<b>Pre-Application</b>		
29 <sup>th</sup> March 2018	Email from the Applicant	Draft DCO and DMLs provided to the MMO for review.
16 <sup>th</sup> April 2018	Email from the MMO	Feedback on the draft DCO and DMLs.
17 <sup>th</sup> April 2018	Meeting	Discussion of MMO's feedback on the draft DCO and DMLs.
<b>Post-Application</b>		
14 <sup>th</sup> September 2018	Relevant Representation	<p>The MMO's initial feedback on the DCO application. See Appendix 1 of this SOCG for the full representation along with the Applicant's response. In summary, key topics raised by the MMO include:</p> <ul style="list-style-type: none"> <li>• Arbitration</li> <li>• Cooperation between DMLs</li> <li>• Transfer of benefit</li> <li>• Timescales for submission of documents- 6 months vs 4</li> <li>• Summary of O&amp;M activities</li> <li>• Area/volumes of cable protection</li> <li>• Definitions of turbine scour protection</li> <li>• Definitions of cable crossings</li> <li>• Array cables defined</li> <li>• Max. hammer energy</li> <li>• Kingfisher notices</li> </ul>

Date	Contact Type	Topic
		<ul style="list-style-type: none"> <li>• Man-made disposal at sea</li> <li>• OSPAR returns disposal wording</li> <li>• Annex 1 reef survey expansion</li> <li>• Post-construction surveys for 3 years</li> <li>• Piling noise monitoring mitigation</li> <li>• Soft start piling</li> <li>• Benthic surveys</li> <li>• Align the conditions with the IPMP</li> <li>• Monitoring requirements</li> <li>• O&amp;M plan</li> </ul>
16th January 2019	Deadline 1 Submission	The MMO's response to the Applicant's Change Request to the Application and Errata for Environmental Statement
16th January 2019	Deadline 1 Submission	Responses to the Examining Authority's First Round of Written Questions
14th February 2019	Deadline 3 Submission	Oral cases made during ISHs
1st March 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant
14th March 2019	Deadline 4 Submission	Response to Examining Authorities Further Written Questions
21st March 2019	Deadline 5 Submission	Response to Examining Authorities Further Written Questions
9th April 2019	Deadline 6 Submission	Oral cases made during ISHs
30th April 2019	Meeting (by conference call)	Discussions regarding the SoCG between the MMO and the Applicant

44. The MMO's relevant representation includes comments on the draft DCO which are detailed in Appendix 1 along with the Applicant's response. The draft DCO has been updated and submitted at Deadline 4. The main points under discussion are arbitration, timeframes for submission of documents, deemed discharge process and scour protection and cable protection maximum parameters on the DMLs.

**The undersigned agree to the provisions within this SOCG**

Signed	P. Stephenson
Printed Name	Paul Stephenson
Position	Senior Case Manager
On behalf of	The Marine Management Organisation
Date	2 May 2019

Signed	R Sherwood
Printed Name	Rebecca Sherwood
Position	Norfolk Vanguard Consents Manager
On behalf of	Norfolk Vanguard Ltd (the Applicant)
Date	2 May 2019