Norfolk Vanguard Offshore Wind Farm

Statement of Common Ground

Environment Agency

Applicant: Norfolk Vanguard Limited
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Glossary

A/HMWB	Artificial/Heavily Modified Water Body
CIA	Cumulative Impact Assessment
CoCP	Code of Construction Practice
CWS	County Wildlife Sites
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
EMP	Ecological Management Plan
EPP	Evidence Plan Process
ETG	Expert Topic Group
GCN	Great crested newt
GEP	Good Ecological Potential
GES	Good Ecological Status
HDD	Horizontal Directional Drilling
HIA	Health Impact Assessment
HRA	Habitats Regulations Assessment
LiDAR	Light Detection and Ranging
LSE	Likely Significant Effects
MCZ	Marine Conservation Zone
MMP	Materials Management Plan
MSA	Mineral Safeguard Area
OCoCP	Outline Code of Construction Practice
OLEMS	Outline Landscape and Environmental Management Strategy
OWF	Offshore Wind Farm
PEI	Preliminary Environmental Information
PEIR	Preliminary Environmental Information Report
SAC	Special Area of Conservation
SoCG	Statement of Common Ground
SPZ	Source Protection Zone
WFD	Water Framework Directive

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. 100m x 100m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400kV overhead lines

Necton National Grid substation	The existing 400kV substation near 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 400kV (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 (e.g. HDD)	Temporary areas required for trenchless crossing works.

1 INTRODUCTION

1. This Statement of Common Ground (SoCG) has been prepared between the Environment Agency 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 Environment Agency on the Norfolk Vanguard DCO application (hereafter 'the Application'). Topic specific matters agreed, not agreed and actions to resolve between the Environment Agency and the Applicant are included.

3. Points that are not agreed will be the subject of ongoing discussion wherever possible to resolve or refine the extent of disagreement between the parties.

1.1 The Development

4. 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 70km and 47km 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.

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

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

6. 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 Environment Agency

7. This section briefly summarises the consultation that the Applicant has had with the Environment Agency. For further information on the consultation process please see the Consultation Report (document reference 5.1 of the Application).

1.2.1 Pre-Application

8. The Applicant has engaged with the Environment Agency on 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.

9. During formal (Section 42) consultation, the Environment Agency provided comments on the Preliminary Environmental Information Report (PEIR) by way of a letter dated 11th December 2017.

10. Further to the statutory Section 42 consultation, several meetings were held with the Environment Agency through the Evidence Plan Process (EPP). These are detailed throughout the SoCG and minutes of the meetings are provided in Appendices 9.15 – 9.26 (pre-Section 42) and Appendices 25.1 – 25.9 (post-Section 42) of the Consultation Report (document reference 5.1 of the Application).

1.2.2 Post-Application

11. This is a live document that is being updated as consultation on the project progresses.

12. The Applicant met with the Environment Agency on 30th August 2018 to discuss the Environmental Statement (ES) and initial feedback. The Environment Agency also submitted a Relevant Representation to the Planning Inspectorate on the 7th September 2018.

2 STATEMENT OF COMMON GROUND

13. Within the sections and tables below the different topics for areas of agreement and disagreement between the Environment Agency and the Applicant are set out.

2.1 Marine Geology, Oceanography and Physical Processes

14. The project has the potential to impact upon marine geology, oceanography and physical processes. Chapter 8 of the Norfolk Vanguard ES (document reference 6.1.8 of the Application) provides an assessment of the significance of these impacts.

15. Table 1 provides an overview of meetings and correspondence undertaken with the Environment Agency regarding marine geology, oceanography and physical processes.

16. Table 2 provides areas of agreement and disagreement regarding marine geology, oceanography and physical processes. The Environment Agency remit is primarily focused on Water Framework Directive waterbodies including transitional and coastal waters.

17. 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 Environment Agency in relation to marine geology, oceanography and physical processes

Date	Contact Type	Topic
Pre-Application		
2nd February 2017	Email from the Applicant	Provision of the Marine Physical Processes Method Statement (see Appendix 9.2 of the Consultation Report).
16th February 2017	Benthic and Intertidal Ecology, Fish Ecology, Marine Physical Processes and Marine Water and Sediment Quality Scoping Expert Topic Group (ETG) 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).
22nd June 2017	Email from the Applicant	Offshore HRA Screening (Appendix 5.1 of the Information to Support HRA Report (document 5.3)) provided for information.
22nd June 2017	Email from the Applicant	Provision of draft PEIR documents (Chapter 8 and Appendix 10.1 of the ES (Fugro survey report) to inform discussions at the Norfolk Vanguard Benthic Ecology and Marine Physical Processes ETG meeting.

Date	Contact Type	Topic
5th July 2017	Benthic and Intertidal Ecology and Marine Physical Processes Preliminary Environmental Information (PEI) ETG Meeting	Discussion of draft PEIR Marine Geology, Oceanography and Physical Processes chapter
14th July 2017	Email from the Environment Agency	Provision of the Southern North Sea Sediment Transport Study.
11th December 2017	Email from the Environment Agency	PEIR feedback
16th January 2018	Email from the Applicant	Provision of the following draft technical reports to support the Information to Support HRA report: • Appendix 7.1 ABPmer Sandwave study; and • Appendix 7.2 Envision Sabellaria data review
31st January 2018	Marine Physical Processes and Benthic Ecology HRA ETG meeting	Discussion of PEIR feedback (see Appendix 25.6 of the Consultation Report).
22nd February 2018	Email from the Applicant	Provision of draft Norfolk Vanguard Information to Support HRA (document 5.3).
Post-Application		
7th September 2018	Relevant Representation	Initial feedback on the DCO application

Table 2 Statement of Common Ground - marine geology, oceanography and physical processes

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Environmental Impact Assessment			
Existing Environment	Survey data collected for Norfolk Vanguard for the characterisation of Marine Geology, Oceanography and Physical Processes are suitable for the assessment.	Agreed	Both parties agree sufficient survey data has been collected.
	The ES adequately characterises the baseline environment in terms of Marine Geology, Oceanography and Physical Processes.	Agreed	Both parties the baseline is sufficiently characterised.
Assessment methodology	The list of potential impacts assessed for Marine Geology, Oceanography and Physical Processes is appropriate.	Agreed	Both parties agree the impacts identified are appropriate.
	The impact assessment methodologies used provide an appropriate approach to assessing potential impacts of the proposed project. This includes: • The assessment using expert judgement based upon knowledge of sites and available contextual information (in particular, Zonal and East Anglia ONE studies and modelling), and therefore no new modelling (e.g. sediment plumes or deposition) was required to be undertaken for the assessment • The definitions used of sensitivity and magnitude in the impact assessment are appropriate. These 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.	Agreed	Both parties agree the methodology is appropriate.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	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 the worst-case scenario presented in the ES is appropriate for this project.
Assessment findings	The characterisation of receptor sensitivity is appropriate.	Agreed	It is agreed by both parties that the ES adequately assesses impacts.
	The magnitude of effect is correctly identified.	Agreed	It is agreed by both parties that the ES adequately assesses impacts.
	The impact significance conclusions of negligible significance on marine geology, oceanography and physical processes receptors for Norfolk Vanguard alone are appropriate.	Agreed	It is agreed by both parties that the ES adequately assesses impacts.
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	Both parties agree the plans and projects in the CIA are appropriate.
	The CIA methodology is appropriate.	Agreed	It is agreed by both parties that the CIA is appropriate.
	The cumulative impact conclusions of negligible significance are appropriate.	Agreed	It is agreed by both parties that the CIA is appropriate.
Mitigation and Management			
Mitigation and Management	The proposed mitigation and monitoring outlined in the In Principle Monitoring Plan (document 8.12) and outline Project Environmental Management Plan (document 8.14) is adequate.	To be discussed	
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	Part 4 of Schedules 9, 10, 11 and 12 of the DCO appropriately reflects the commitments made in the ES.	To be discussed	

2.2 Marine Water and Sediment Quality

18. The project has the potential to impact upon Marine Water and Sediment Quality. Chapter 9 of the Norfolk Vanguard ES provides an assessment of the significance of these impacts. The Marine Water and Sediment Quality assessment has informed the Water Framework Directive (WFD) assessment provided in Appendix 20.2 of the ES.

19. Table 3 provides an overview of meetings and correspondence undertaken with the Environment Agency regarding Marine Water and Sediment Quality.

20. Table 4 provides areas of agreement (common ground) and disagreement regarding Marine Water and Sediment Quality.

21. 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
Pre-Application		
2nd 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).
16th 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).
11th December 2017	Email from the Environment Agency	PEIR feedback
Post-Application		
7th September 2018	Relevant Representation	Initial feedback on the DCO application

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

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Environmental Impact Assessment			
Existing Environment	Survey data collected for Norfolk Vanguard for the characterisation of Marine Water and Sediment Quality are suitable for the assessment.	Agreed	Both parties agree sufficient survey data has been collected.
	The ES adequately characterises the baseline environment in terms of Marine Water and Sediment Quality	Agreed	Both parties the baseline is sufficiently characterised.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to Marine Water and Sediment Quality has been used.	Agreed	It is agreed by both parties that the appropriate legislation, planning policy and guidance relevant to Marine Water and Sediment Quality has been used
	The list of potential impacts on Marine Water and Sediment Quality assessed is appropriate	Agreed	Both parties agree the impacts identified are appropriate.
	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	Both parties agree the methodology is 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 the worst-case scenario presented in the ES is appropriate.
Assessment findings	The characterisation of receptor sensitivity is appropriate	Agreed	It is agreed by both parties that the ES adequately assesses impacts.
	The magnitude of effect is correctly identified	Agreed	It is agreed by both parties that the ES adequately assesses impacts.
	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 ES adequately assesses impacts.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
WFD assessment	The conclusions of the WFD assessment are appropriate	Agreed	It is agreed by both parties that the WFD assessment is appropriate.
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate	Agreed	Both parties agree the plans and projects in the CIA are appropriate.
	The CIA methodology is appropriate	Agreed	It is agreed by both parties that the CIA is appropriate.
	The cumulative impact conclusions of negligible or minor significance are appropriate	Agreed	It is agreed by both parties that the CIA is appropriate.

2.3 Ground Conditions and Contamination

22. The project has the potential to impact upon ground conditions and contamination. Chapter 19 of the ES, (document reference 6.1.19 of the Application), provides an assessment of the significance of these impacts.

23. Table 5 provides an overview of meetings and correspondence undertaken with the Environment Agency regarding ground conditions and contamination.

24. Table 6 provides areas of agreement and disagreement regarding ground conditions and contamination.

25. Further details on the Evidence Plan for ground conditions and contamination can be found in Appendix 9.20 and Appendix 25.2 of the Consultation Report (document reference 5.1 of the Application).

Table 5 Summary of Consultation with the Environment Agency regarding ground conditions and contamination

Date	Contact Type	Topic
Pre-Application		
14th January 2017	Email from the Applicant	Provision of Water Resources and Flood Risk and Onshore Ground Conditions Method Statements (provided in Appendix 9.8 of the Consultation Report).
25th January 2017	Water Quality, Water Framework Directive (WFD), Flood Risk, Land Quality and Geology Scoping ETG Meeting	Method statement, project updates and approach to the assessment (methodology, impacts, data collection etc).
8th September 2017	Onshore Water Resources, Flood Risk, Ground Conditions and Contamination pre-PEI ETG Meeting	Project update and overview of results to date (minutes provided in Appendix 9.20 of the Consultation Report).
11th December 2017	Email from the Environment Agency	PEIR feedback
23rd January 2018	Onshore Water Resources, Flood Risk, Ground Conditions and Contamination ETG meeting – PEI Responses	PEIR comments and approach to updating assessments (minutes provided in Appendix 25.2 of the Consultation Report).
Post-Application		
30th August 2018	Meeting	ES submission update and initial feedback.
7th September 2018	Relevant Representation	Initial feedback on the DCO application

Table 6 Statement of Common Ground - ground conditions and contamination

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Environmental Impact Assessment			
Existing Environment	Sufficient survey data has been collected to undertake the assessment. This was discussed and agreed during ETG meetings in January and September 2017.	Agreed	It is agreed by both parties that sufficient survey data have been collected to undertake the assessment.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to ground conditions and contamination has been used.	Agreed	It is agreed by both parties that the appropriate legislation, planning policy and guidance relevant to ground conditions and contamination has been used
	The impact assessment methodologies used (as proposed in the Evidence Plan method statement provided in January 2017) for the EIA represent an appropriate approach to assessing potential impacts of the project. This was discussed and agreed during ETG meetings in January and September 2017.	Agreed	It is agreed by both parties that the list of potential impacts assessed for ground conditions is appropriate to the project.
	The worst-case scenario presented in the assessment is appropriate. This was discussed and agreed during the ETG meeting in January 2018.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	Impacts to human health including construction workers and general public during any excavations associated with construction is set out in Chapter 19 Ground Conditions and Contamination – section 19.7.5.6. This identifies known sources of existing contamination and includes a consideration of impacts related to the mobilisation of existing contamination. The assessment is considered appropriate and adheres to the agreed methodology.	Agreed	The Environment Agency confirm that consideration should be given to the impacts of mobilising existing contamination on excavation.
Assessment findings	The assessment adequately characterises the baseline environment in terms of ground conditions and contamination. This was discussed and agreed during the ETG meeting in September 2017.	Agreed	It is agreed by both parties that the ES adequately characterises the baseline environment.
	The characterisation of receptor sensitivity is appropriate.	Agreed	It is agreed by both parties that the ES adequately assesses impacts.
	The assessment of impacts for construction, operation and decommissioning presented is appropriate and, assuming the inclusion of the embedded mitigation described, impacts on ground conditions and contamination are likely to be non-significant in EIA terms.	Agreed	It is agreed by both parties that the assessment of impacts is appropriate.
	The assessment of cumulative impacts is appropriate and, assuming the inclusion of the embedded mitigation described, cumulative impacts on ground conditions and contamination are likely to be non-significant in EIA terms.	Agreed	It is agreed by both parties that the assessment of cumulative impacts is appropriate.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Approach to mitigation	The provision of a Materials Management Plan (MMP) is considered suitable to mitigate any potential impacts to the Mineral Safeguarding Areas (MSA). This will form part of the final CoCP this is secured by Requirement 20(2)(j) in the draft DCO. This was discussed and agreed during the ETG meeting in September 2017. It is acknowledged that the Environment Agency does not have a statutory responsibility to safeguard minerals but has an interest in the environmental issues arising from this activity.	Agreed	It is agreed by both parties that the provision of an MMP will provide sufficient mitigation to the MSAs.
	A written scheme dealing with contamination of any land and groundwater will be submitted and approved by the relevant local planning authority in consultation with the Environment Agency before any stage of the project commences (this is secured by Requirement 20(2)(d) in the draft DCO). The scheme will be based upon the model procedures for the management of land contamination. This will include known sources of existing contamination including historic contamination at Happisburgh, potential contamination at the brick works at north east of North Walsham, the infilled clay and shale pit at Necton, and a military plane crash near Necton in 1996.	Agreed	The Environment Agency confirm that the assessment should be undertaken to assess the potential for petroleum hydrocarbon pollution within the landfall working area at Happisburgh and potential contamination at the brick works at north east of North Walsham, and the infilled clay and shale pit at Necton.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	The site of a military plane crash near Necton in 1996 has the potential for historic contamination including hydrazine, aviation fuel and carbon composite fibre deposits. A clean up of the site was completed in within 5 weeks of the incident by the Royal Air Force (RAF) and the Royal Danish Airforce (RDAF), which included armament specialists and hydrazine safety experts. A potential risk of radioactive material was initially highlighted, however based on the site recovery reports produced by both the RAF and RDAF there is no evidence that radioactive materials were present. The Applicant understands that to date Breckland Council has not classified the land as having a risk of historic radioactive contamination. Breckland Council has a duty to inspect land but there must be reasonable grounds which are defined in the statutory guidance. A written scheme dealing with contamination will be produced by the Applicant post-consent.. Any site investigations would be designed taking into account the best available desk-based information and would be undertaken by appropriately qualified specialists. The written scheme for the management of contamination of any land and groundwater will be submitted and approved by the relevant local planning authority in consultation with the Environment Agency. This is secured through Requirement 20 of the draft DCO which requires a CoCP to be approved by the local planning authority ahead of each phase of the onshore construction works.	The Environment Agency will only carry out an intrusive investigation on behalf of the Local Authority if desk studies and non-intrusive surveys show the need for one.	

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	Given the impacts of the project, the mitigation proposed for ground conditions and contamination is considered appropriate and adequate. This was discussed and agreed during the ETG meeting in January 2018.	Agreed	It is agreed by both parties that the proposed mitigation will result in non-significant impacts.
	The approach to mitigating potential impacts on Source Protection Zones (SPZ) at trenchless crossings, including undertaking pre-construction ground investigations and hydrogeological risk assessments is considered appropriate. Regulators will be consulted on risk assessments for key areas within SPZ1. This was discussed and agreed during ETG meetings in September 2017 and January 2018 and in the Relevant Representation (September 2018).	Agreed	It is agreed by both parties that the proposed mitigation will result in non-significant impacts.
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	The wording of Requirement 20 provided within the draft DCO (and supporting certified documents) for the mitigation of impacts associated with ground conditions and contamination are considered appropriate and adequate. The Environment Agency will be consulted prior to approval of relevant elements of the final CoCP submitted for each phase, including but not limited to pollution control plans, invasive species, contaminated land and groundwater, soil management, construction method statements, site and excavated waste management and surface water drainage plans.	Agreed	It is agreed by both parties that the DCO wording to include the Environment Agency as a named stakeholder for consultation prior to approval for matters and issues under the Environment Agency's remit is appropriate.

2.4 Water Resources and Flood Risk

26. The project has the potential to impact upon water resources and flood risk. Chapter 20 of the ES, (document reference 6.1.20 of the Application), provides an assessment of the significance of these impacts.

27. Table 7 provides an overview of meetings and correspondence undertaken with the Environment Agency regarding water resources and flood risk.

28. Table 8 provides areas of agreement and disagreement regarding water resources and flood risk.

29. Further details on the Evidence Plan for water resources and flood risk can be found in Appendix 9.20 and Appendix 25.2 of the Consultation Report (document reference 5.1 of the Application).

Table 7 Summary of Consultation with the Environment Agency regarding water resources and flood risk

Date	Contact Type	Topic
Pre-Application		
14th January 2017	Email from the Applicant	Provision of Water Resources and Flood Risk and Onshore Ground Conditions Method Statements (provided in Appendix 9.8 of the Consultation Report).
25th January 2017	Water Quality, WFD, Flood Risk, Land Quality and Geology Scoping ETG Meeting	Method statement, project updates and approach to the assessment (methodology, impacts, data collection etc).
12th March 2017	Email from the Environment Agency	Key points that the Environment Agency would expect to see in a method statement for trench excavations in an SPZ.
26th May 2017	Water Quality, WFD, Flood Risk ETG Meeting	Project update and approach.
8th September 2017	Onshore Water Resources, Flood Risk, Ground Conditions and Contamination pre-PEI ETG Meeting	Project update and overview of results to date (minutes provided in Appendix 9.20 of the Consultation Report).
11th December 2017	Email from the Environment Agency	PEIR feedback

Date	Contact Type	Topic
23rd January 2018	Onshore Water Resources, Flood Risk, Ground Conditions and Contamination ETG meeting – PEI Responses	PEIR comments and approach to updating assessments (minutes provided in Appendix 25.2 of the Consultation Report).
26 February 2018	Email from the Applicant	Update on proposed assessment method for water receptors.
22 March 2018	EPP Meeting – Water Resources	Meeting to discuss crossing of Groundwater SPZ's, including the North Walsham and Dilham Canal (minutes provided in Appendix 25.2 of the Consultation Report).
Post-Application		
30 August 2018	Meeting	ES submission update and initial feedback.
7th September 2018	Relevant Representation	Initial feedback on the DCO application

Table 8 Statement of Common Ground - water resources and flood risk

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Environmental Impact Assessment			
Existing Environment	Sufficient survey data has been collected to inform the assessment. This was discussed and agreed during the ETG meetings in January and September 2017.	Agreed	It is agreed by both parties that sufficient survey data have been collected to undertake the assessment.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to water resources and flood risk has been used.	Agreed	It is agreed by both parties that the appropriate legislation, planning policy and guidance relevant to water resources and flood risk has been used
	The impact assessment methodologies used for the EIA provide an appropriate approach to assessing potential impacts of the project. This was discussed in the ETG meeting in January 2017, where concerns were raised over the methodology by the Environment Agency. This led to a revision of the methodology. The updated methodology was discussed and agreed during the ETG meeting in September 2017.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.
	The worst-case scenario presented in the assessment is appropriate. This was discussed and agreed during the ETG meeting in January 2018.	Agreed	It is agreed by both parties that the worst-case scenario presented in the ES is appropriate for this project.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	Groundwater receptors in the study area support abstractions for public and private water supply (both licensed and unlicensed and including shallow wells) and are considered to have a high vulnerability. These have been assigned a high sensitivity and high value within the assessment (refer to section 20.7.5.3.5 within Chapter 20 Water Resources and Flood Risk). This assignation is considered appropriate for the assessment. Additional ground investigation reporting has also been provided to the Environment Agency (Terra consult, 2017 and GHD, 2018).	Agreed. The Environment Agency also holds data on aquifer geology and borehole depth for private groundwater abstractions if required.	It is agreed by both parties that unlicensed water supplies are assigned high sensitivity unless information is collected to show mains water is available to a particular household and it is not the sole source of drinking water supply.
	Within Chapter 19 (Ground Conditions and Contamination) two broad groups of geology are presented on figures: Bedrock Geology (19.1) and Superficial Geology (19.2). These maps use the naming convention (bedrock and superficial) that British Geological Survey assigned within the dataset provided. Aquifers are presented on Figure 19.3 and use the classifications provided within that dataset. All groundwater receptors in the study area are considered to have a high vulnerability. These have been assigned a high sensitivity and high value within the assessment (refer to section 20.7.5.3.5 within Chapter 20 Water Resources and Flood Risk). This assignation is considered appropriate for the assessment.	Agreed	The Environment Agency wish to point out that whilst crag is referred to as superficial, it is a principal aquifer and must be accorded the protection warranted for such an important groundwater resources unit. The Environment Agency also suggest the classification of bedrock in maps 1-5 as Neogene to Quaternary Rocks (Undifferentiated)" should be replaced with Crag. The Environment Agency suggests the Southern North Sea candidate Special Area or Conservation (cSAC) should be noted at the landfall area in Map 1 bedrock and superficial aquifers.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Assessment findings	The ES adequately characterises the baseline environment in terms of water resources and flood risk. This was discussed and agreed during the ETG meeting in September 2017.	Agreed	It is agreed by both parties that the ES adequately characterises the baseline environment.
	The assessment of impacts for construction, operation and decommissioning presented are appropriate and consistent with the agreed assessment methodologies. This was discussed at the meeting in August 2018.	Agreed	It is agreed by both parties that the ES adequately assesses impacts. The Environment Agency also point out that whilst that Blakeney Spit Lagoon was identified as being at Good Ecological Status (GES) in the WFD assessment, in fact it can only achieve Good Ecological Potential (GEP) due to its modified nature.
	The assessment of cumulative impacts is appropriate and consistent with the agreed methodologies. This was discussed at the meeting in August 2018.	Agreed	It is agreed by both parties that the ES adequately assesses cumulative impacts.
Approach to mitigation	The proposed locations for trenchless crossing techniques do not present risks that cannot be mitigated against, subject to detailed design. This was discussed and agreed during the ETG meeting in September 2017.	Agreed	It is agreed by both parties that the proposed trenchless crossing techniques are appropriate, subject to detailed design.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	Detailed Construction Method Statements will be developed by the Principal Contractor for relevant construction operations and will be included as part of the final CoCP for each stage of the works. These will provide details of the associated pollution control plans. The final CoCP for each stage of the works will be submitted to and approved by the relevant local planning authority in consultation with the Environment Agency prior to works on that phase commencing. This represents an appropriate level of pollution prevention control. This will also include the detailed design of each HDD and measures for managing breakout of associated drilling fluid (inert clay based fluid).	Agreed	It is agreed by both parties that the DCO will be updated to reflect the Environment Agency's role in the approval of the CoCP and pollution control plans.
	A Surface Water and Drainage Plan will form part of the final CoCP (Requirement 20 (2)(i)). This will be developed, and agreed with the Environment Agency, to manage surface water within the working areas and ensure ongoing drainage of surrounding land. This typically includes interceptor drainage ditches being temporarily installed parallel to the trenches and soil storage areas to provide interception of surface water runoff and the use of pumps to remove water from the trenches during cable installation.	Agreed	It is agreed by both parties that the development of a Surface Water and Drainage Plan agreed with the Environment Agency is appropriate to manage surface water within the working areas to ensure sensitive water bodies are protected from the effects of sediment and soil mobilisation.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	The onshore cable duct installation will be undertaken in a sectionalised approach with teams working on a short length at a time (approximately 150m section). Once the cable ducts have been installed, each 150m section will be back filled and the top soil replaced before moving onto the next section. Works in any given 150m section are expected to take approximately 2 weeks. This would limit the extent of open excavation in any one location to 150m and also limit the extent of excavated soil stored to these 150m sections. Where possible soil will not be stored in the functional floodplain. Where this is unavoidable soil storage will be laid out with gaps at regular intervals to minimise impact to flood waters.	Not agreed. The final CoCP should include proposals for spoil not to be stored in the functional floodplain of a watercourse, to avoid removing flood water storage and to decrease the risk of soil and sediment mobilisation.	
	Secondary consents are listed in Table 11.1 of the CoCP. Protective Provisions for the Environment Agency are set out in Schedule 16, Part 7 of the draft DCO, which seek to disapply the requirement for secondary consent for any works within 8m of a main river. Any works within 8m of a main river would still require prior approval from the Environment Agency, which would be delivered through the Protective Provisions as set out in the draft DCO.	The Environment Agency highlight that secondary consents will be required for any works within 8m of a main river if agreement cannot be reached through the Protective Provisions. The Environment Agency highlight that the Whitewater River is a main river.	

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	An assessment and monitoring process for the risk of bentonite or other drilling fluids release at trenchless crossings will be included in the final CoCP and be referenced in the Environmental Incident Response and Contingency Plan.	Agreed	Both parties agree that this will be included in the final CoCP.
	The selection of inert solid plastic rather than oil insulated cables will greatly reduce the contamination risk. In addition, the risk of mobilising existing contamination will be further reduced by the proposed sectionalised excavation of workings. This was also set out within the Environment Agency Relevant Representation dated 7th September 2018.	Agreed	Both parties agree that these project details will reduce the risk of contamination.
	The worst case shallow depth of the cable corridor (1.5m) and jointing bays (2m) and small volume of the installations means that any change in shallow aquifer groundwater flow will be localised and insignificant. Mitigation measures are proposed for trenchless crossings at SPZs (including ground investigations and hydrogeological risk assessments). It is acknowledged that some trenchless crossings will be deeper than 1.5m, but that the risks associated with SPZs have been discussed and agreed on in March 2018. This was discussed and agreed during ETG meetings in September 2017 and January 2018 and in the Relevant Representation (September 2018).	Agreed	Both parties agree that any change in shallow aquifer and groundwater flow should be localised and insignificant.
	Local landowners will be consulted on private water supplies during pre-construction works to ensure the proper assessment and protection of shallow wells in proximity to the works. This was also set out within the Environment Agency Relevant Representation dated 7th September 2018	Agreed	It is agreed by both parties that consulting with landowners to identify private water supplies, will inform the assessment and protection of shallow wells.
	The mitigation proposed for water resources is appropriate and adequate. This was discussed at the meeting in August 2018.	Agreed	It is agreed by both parties that the ES provides adequate mitigation for water resources.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	The mitigation proposed for managing flood risk is appropriate and adequate. This was discussed at the meeting in August 2018.	Agreed	It is agreed by both parties that the ES provides adequate mitigation for flood risk (with the exception of spoil storage in floodplains).
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	The wording of Requirement 20 provided within the draft DCO (and supporting certified documents) for the mitigation of impacts to water resources and flood risk is considered appropriate and adequate. This was discussed at the meeting in August 2018. The Environment Agency requested to be a named stakeholder within the DCO.	Agreed	It is agreed by both parties that the DCO wording is adequate subject to the Environment Agency being a named stakeholder.

2.5 Onshore Ecology

30. The project has the potential to impact upon onshore ecology. Chapter 22 of the ES, (document reference 6.1.22 of the Application), provides an assessment of the significance of these impacts.

31. Table 9 provides an overview of meetings and correspondence undertaken with the Environment Agency regarding onshore ecology.

32. Table 10 provides areas of agreement and disagreement regarding onshore ecology.

33. Further details on the Evidence Plan for onshore ecology can be found in Appendix 9.19 and Appendix 25.1 of the Consultation Report (document reference 5.1 of the Application).

Table 9 Summary of Consultation with the Environment Agency regarding onshore ecology

Date	Contact Type	Topic
Pre-Application		
14th January 2017	Email from the Applicant	Provision of the Onshore Ecology and Ornithology Method Statement (provided in Appendix 9.3 of the Consultation Report).
24th January 2017	Onshore Ecology and Ornithology Scoping ETG Meeting	Method statement, project updates and approach to the assessment (methodology, impacts, data collection etc).
24th March 2017	Email from the Environment Agency	Advice on white clawed crayfish.
11th December 2017	Email from the Environment Agency	PEIR feedback.
22nd January 2018	Onshore Ecology and Ornithology ETG meeting – PEI Responses	Project updates, PEIR responses, Habitats Regulations Assessment (HRA), mitigation measures, survey data and results.
9th February 2018	Email from the Applicant to the ETG	Provision of the Norfolk Vanguard Bat Activity Survey Report (Appendix 22.4 of the ES (document 6.2).
Post-Application		
7th September 2018	Relevant Representation	Initial feedback on the DCO application

Table 10 Statement of Common Ground - onshore ecology

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Environmental Impact Assessment			
Survey methodology	Survey methodologies for Phase 1 Habitat Surveys are appropriate and sufficient and were agreed during the ETG meeting held in January 2017.	Agreed	It is agreed by both parties that survey methodologies are appropriate.
	Survey methodologies for Phase 2 Surveys are appropriate and sufficient and were agreed during the ETG meeting held in January 2017.	Agreed	It is agreed by both parties that survey methodologies are appropriate.
Existing Environment	Survey data collected for Norfolk Vanguard for the characterisation of onshore ecology are suitable for the assessment.	Agreed	It is agreed by both parties that survey data is suitable.
	The ES adequately characterises the baseline environment in terms of onshore ecology.	Agreed	It is agreed by both parties that the baseline is adequately characterised.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to ecology has been considered for the project (listed in section 22.2 of Chapter 22 Onshore Ecology).	Agreed	It is agreed by both parties that policy and legislation has been appropriately considered.
	The list of potential onshore ecology impacts assessed is appropriate.	Agreed	It is agreed by both parties that the potential impacts identified within the EIA are appropriate.
	The impact assessment methodologies used for the EIA provide an appropriate approach to assessing potential impacts of the project. This was discussed and agreed during the ETG meeting in January 2017.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	The worst case scenario presented in the ES, is appropriate for the project.	Agreed	It is agreed by both parties that the worst case scenario is appropriate.
	Non-statutory designated sites have been defined as sites of medium sensitivity. The criteria described for sites of medium sensitivity includes that sites can support regularly occurring populations of nationally important species. This is detailed in Table 22.4 of ES Chapter 22 Onshore Ecology (DCO document 6.1). On this basis defining non-statutory designated sites as medium sensitivity is appropriate to inform the assessment.	Not agreed. The Environment Agency does not support approach that non-statutory designated sites are of medium importance. There are local wildlife and County wildlife sites that have qualifying features of similar quality and importance to SSSIs.	
Assessment findings	Potential impacts to nesting sand martins at Happisburgh Cliffs are presented in Chapter 23 Onshore Ornithology (section 27.3.6.3). A low magnitude effect is predicted due to the distance of separation between the works and the nesting area (130m). On this basis sand martins have been identified as a potential ecological receptor at the landfall and an assessment undertaken. No mitigation has been identified as being required.	The Environment Agency defers to Natural England's position on this matter.	The Environment Agency defers to Natural England's position on this matter.
	The assessment of impacts for construction, operation and decommissioning presented are appropriate and consistent with the agreed assessment methodologies.	Agreed	It is agreed by both parties that the assessment of impacts is appropriate.
	The assessment of cumulative impacts is appropriate and consistent with the agreed methodologies.	Agreed	It is agreed by both parties that the assessment of cumulative impacts is appropriate.
Mitigation and Management			

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Approach to mitigation	All mitigation measures required are outlined in the Outline CoCP and Outline Landscape and Environmental Management Strategy (OLEMS).	Agreed	It is agreed by both parties that the required mitigation measures are outlined in the Outline CoCP and OLEMS, subject to the provision of the final CoCP to be developed post-consent.
	The use of trenchless crossing techniques at County Wildlife Sites (CWS) is acceptable subject to detailed design. This was discussed and agreed (in principle) during the ETG meeting in January 2018.	Agreed	It is agreed by both parties that the use of trenchless crossings at CWS are acceptable, subject to detailed design.
	Commitments to avoid all CWS, either through site selection work or through trenchless crossing techniques, will result in no impacts to these sites associated with the construction, operation and decommissioning of the project.	Agreed	It is agreed by both parties that no impacts will result to CWS.

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
	Where dam and divert is proposed for watercourse crossings, this would be required for typically no longer than 1 week – refer to paragraph 118 in Chapter 20 Water Resources and Flood Risk. Mitigation measures are outlined within the CoCP including fish rescue between the temporary dams prior to dewatering, and ensuring that any pumps, flumes (pipes) or diversion channels are appropriately sized. The Applicant has also committed to develop a scheme and programme for each watercourse crossing, diversion and reinstatement. This will include site specific details general arrangement and mitigation. This scheme will be submitted to and, approved by the relevant planning authority. This is secured through Requirement 25. (Although the Environment Agency is not referenced in Requirement 25, works in or near main rivers are covered by Schedule 16 Part 7 Protective Provisions For the Protection of the Environment Agency and drainage authorities). With these commitments in place there is sufficient protection of fish potentially affected by watercourse crossings.	Agreed. The Environment Agency confirm that in order to allow fish passage for the duration of the work (especially if dam or diversion is in place for up to 2 years) it would be preferable to avoid use of pumps, and where unavoidable to use a screen to prevent the uptake of fish into the pump mechanism.	It is agreed by both parties that mitigation measures related to fish is sufficient.
	The provision of an Ecological Management Plan (EMP) (based on the OLEMS submitted with the DCO application, document reference 8.7) is considered suitable to ensure potential impacts identified in the EcIA are reduced to acceptable levels.	Under discussion	
Habitat Regulations Assessment			

Topic	Norfolk Vanguard Limited position	Environment Agency position	Final position
Screening of LSE	The methodology and sites screened in for the HRA as presented in Appendix 5.2 of the Information to Support HRA report (Application document 5.3) are considered appropriate, considering sites within 5km of onshore infrastructure. This was discussed during the ETG meeting in January 2018.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.
	The approach to HRA screening is appropriate, with the only onshore sites screened in for further assessment being: • River Wensum SAC; • Paston Great Barn SAC; • Norfolk Valley Fens SAC; and • The Broads SAC.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.
Assessment of Adverse Effect on Integrity	The approach to the assessment is appropriate and adheres to the agreed methodology.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.
	The conclusions of no adverse effect on site integrity in the Information to Support HRA report (document 5.3) are appropriate.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.	The Environment Agency defer to Natural England for statutory responsibility for HRA screening.
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	Requirement 24 provided within the draft DCO (and supporting certified documents) for the mitigation of impacts to onshore ecology are considered appropriate and adequate.	Agreed	It is agreed by both parties that the DCO wording for Requirement 24 is adequate for mitigation of impacts to onshore ecology.

The undersigned agree to the provisions within this SOCG

Signed	
Printed Name	Barbara Moss-Taylor
Position	Sustainable Places Planning Specialist
On behalf of	Environment Agency
Date	15/01/2019

Signed	R Sherwood
Printed Name	Rebecca Sherwood
Position	Norfolk Vanguard Consents Manager
On behalf of	Norfolk Vanguard Ltd (the Applicant)
Date	15/01/2019