Norfolk Vanguard Offshore Wind Farm

Statement of Common Ground

Eastern Inshore Fisheries and Conservation Authority

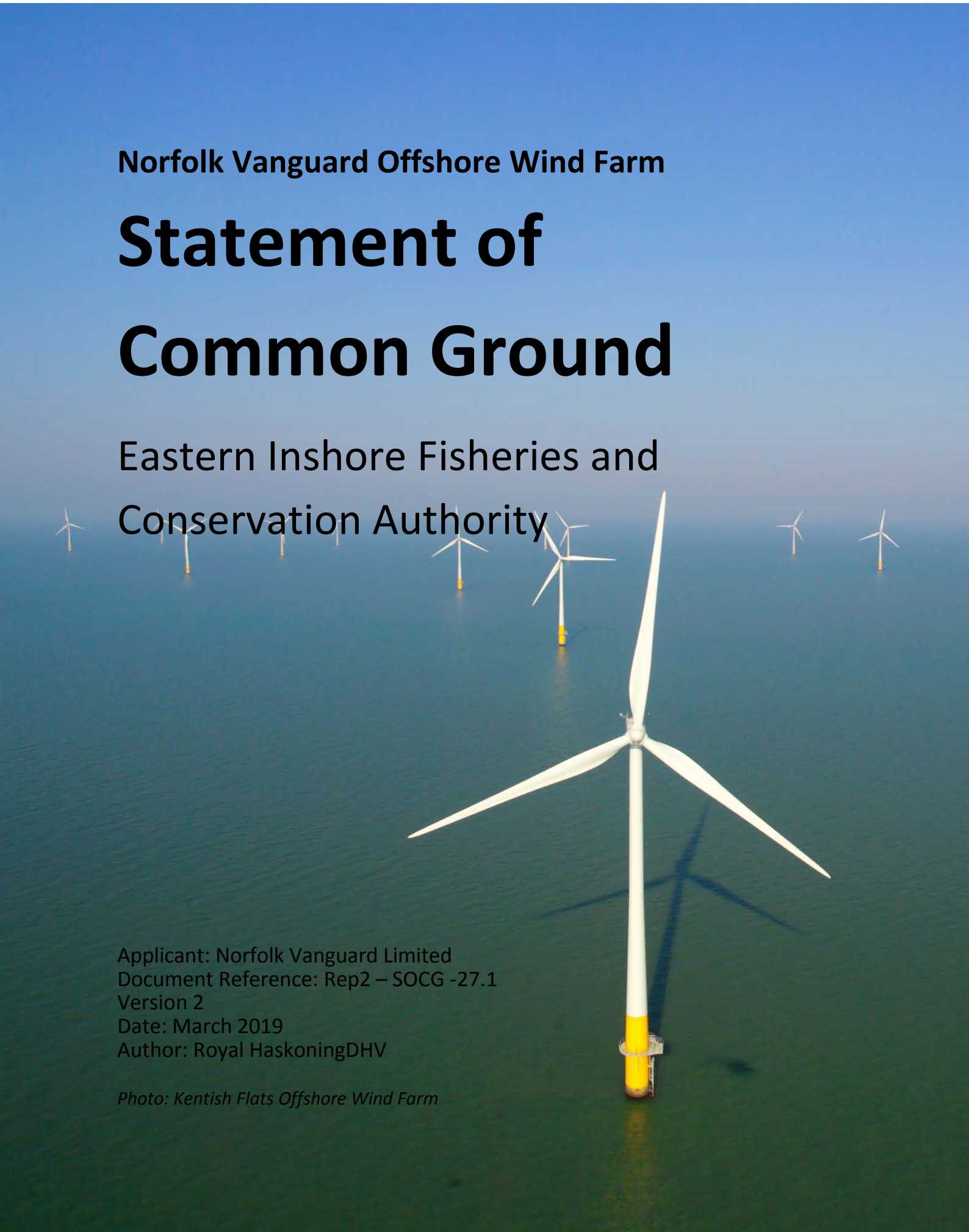

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Photo: Kentish Flats Offshore Wind Farm

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Glossary

cSAC	Candidate Special Area of Conservation
CIA	Cumulative Impact Assessment
DCO	Development Consent Order
DML	Deemed Marine Licence
EMF	Electromagnetic field
ES	Environmental Statement
HRA	Habitats Regulations Assessment
HDD	Horizontal Directional Drilling
IFCA	Inshore Fisheries and Conservation Authority
LiDAR	Light Detection and Ranging
MarESA	Marine Evidence based Sensitivity Assessments
MarLIN	Marine Life Information Network
MMO	Marine Management Organisation
NV East	Norfolk Vanguard East
NV West	Norfolk Vanguard West
OWF	Offshore Wind Farm
PEIR	Preliminary Environmental Information Report
SAC	Special Area of Conservation
SoCG	Statement of Common Ground

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 45 m 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

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

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 60 km 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 (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 Eastern IFCA

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

1.2.1 The Role of the Eastern IFCA

7. The Eastern IFCA is one of ten Inshore Fisheries and Conservation Authorities. The Eastern IFCA district extends six nautical miles out to sea from the Humber in the north to Harwich in the south (see Figure 2.1). The role of the IFCAs is to "lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry".

8. The proposed cable route for Norfolk Vanguard Offshore Wind Farm will pass through the Eastern IFCA district. Therefore, given the potential impacts upon inshore fisheries and habitats, it is considered appropriate for the Eastern IFCA to provide comments on this development. It should be noted that the Eastern IFCA's interest and therefore comments focus primarily on the inshore section of the Norfolk Vanguard cable corridor.

9. It should be noted that while the Eastern IFCA manages fisheries in relation to conservation requirements, the Eastern IFCA is not a body for statutory nature conservation advice and may defer to Natural England on these matters. Equally it should be noted that the Eastern IFCA is a regulator of inshore fisheries rather than a representative. It is, however, in the Eastern IFCA's remit to manage a sustainable marine environment and support a viable fishing industry. As such, the Eastern IFCA will provide comments on the impacts of the proposed Norfolk Vanguard cable route on the marine environment and inshore fisheries.

1.2.2 Pre-Application

10. The Applicant has engaged with the Eastern IFCA 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.

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

12. Further to the statutory Section 42 consultation, several meetings were held with the Eastern IFCA through the Evidence Plan Process.

13. Table 1, Table 3 and Table 5 provide an overview of meetings and correspondence undertaken with the Eastern IFCA. 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).

1.2.3 Post-Application

14. The Eastern IFCA submitted a relevant representation on 14th September 2018. This document takes account of the issues raised in that representation.

15. Consultation with the Eastern IFCA is on-going.

2 STATEMENT OF COMMON GROUND

16. Within the sections and tables below, the different topics and areas of agreement and disagreement between the Eastern IFCA and the Applicant are set out.

2.1 Benthic and Intertidal Ecology

17. The project has the potential to impact upon Benthic and Intertidal Ecology. Chapter 10 of the Norfolk Vanguard Environmental Statement (ES) (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.

18. Table 1 provides an overview of meetings and correspondence undertaken with the Eastern IFCA regarding Benthic and Intertidal Ecology.

19. Table 2 provides areas of agreement (common ground) and disagreement regarding Benthic and Intertidal Ecology.

20. 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 Eastern IFCA in relation to Benthic and Intertidal Ecology

Date	Contact Type	Topic
Pre-Application		
11th March 2016	Letter from the Applicant	Formal launch of the project
2nd February 2017	Email from the Applicant	Provision of the Benthic Ecology 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 Expert Topic Group Meeting	Introduction to the project and the Evidence Plan Process. Discussion regarding approach to EIA.
26th June 2017	Email from the Applicant	Offshore HRA Screening (Appendix 5.1 of the Information to Support HRA report) provided for information.
11th December 2017	PEIR response	Eastern IFCA response to the PEIR.
16th January 2018	Email from the Applicant	Provision of technical reports to support the benthic HRA (drafts of document 6.4 and Appendix 7.1 of the Information to Support HRA report (document 5.3)).

Date	Contact Type	Topic
31st January 2018	Marine Physical Processes and Benthic Ecology HRA ETG meeting	Discussion of PEIR comments and approach to HRA (minutes provided in Appendix 25.6 of the Consultation report).
Post-Application		
14th September 2018	Relevant Representation	Concerns raised by the Eastern IFCA in relation to potential impacts on *Sabellaria spinulosa* and sandbanks, particularly within the Haisborough, Hammond and Winterton SAC. In addition, the Eastern IFCA does not agree that already installed infrastructure and practised licensed activities should not be included in the CIA.

Table 2 Statement of Common Ground - Benthic and intertidal ecology

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
Site Selection and Project Design			
Landfall	Landfall at Happisburgh is the most appropriate of the options available, avoiding the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ).	Agreed in relevant representation submitted on 14th September 2018.	It is agreed by both parties that landfall at Happisburgh South is appropriate
Environmental Impact Assessment and Habitats Regulations Assessment (HRA)			
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 expert topic group meeting in February 2017.	Agreed	It is agreed by both parties that sufficient survey data has been collected to undertake 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 for Benthic Ecology has been characterised appropriately for the assessment.
	The approach to *S. spinulosa* reef mapping is appropriate to inform the EIA based on the data available	Eastern IFCA are still in discussions with Natural England regarding advice on *S. spinulosa* extent. Eastern IFCA defers to Natural England to provide formal advice on the approach to reef mapping for *S. spinulosa* and the presence of the species in the project area.	Deferred to Natural England
	The mapping of potential *Sabellaria* reef by Envision on behalf of Norfolk Vanguard Limited identifies potential reef areas which are largely consistent with the areas Natural England has identified to manage as reef (as shown on Figure 2.1 below).	The Eastern IFCA has surveyed a small area to increase confidence in the Natural England data and to help inform our own management. Eastern IFCA is currently in discussion with Natural	Work on identifying the location of *Sabellaria* reef is ongoing by Eastern IFCA and Natural England.

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
		England with regards to areas to be managed as *Sabellaria* reef.	
	As *Sabellaria spinulosa* is an ephemeral, rapidly growing opportunistic species, surveys targeted at establishing the presence, location and extent of *S. spinulosa* reef habitats are required prior to construction to enable effective micro-siting where possible	Eastern IFCA defers to Natural England to provide formal advice on the requirement for preconstruction surveys for *S. spinulosa,* but would encourage micro-siting to avoid sensitive features wherever possible	Deferred to Natural England
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to Benthic and Intertidal Ecology has been used.	Agreed	It is agreed by both parties that the appropriate legislation, planning policy and guidance relevant to Benthic and Intertidal Ecology has been used
	The list of potential impacts on Benthic and Intertidal Ecology assessed is appropriate.	Agreed	It is agreed by both parties that the list of potential impacts on Benthic and Intertidal Ecology assessed is 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	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.
Worst case scenario	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.
Assessment Findings	The characterisation of sensitivity of benthic receptors is appropriate.	Agreed	It is agreed by both parties that the characterisation of receptor

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
	Sabellaria spinulosa reef has been identified as having medium sensitivity to temporary physical disturbance in accordance with the Marine Life Information Network (MarLIN) Marine Evidence based Sensitivity Assessments (MarESA)		sensitivity for *Sabellaria* reef is appropriate.
	The magnitude of effects on benthic ecology is correctly identified.	Agreed	It is agreed by both parties that the magnitude of effects on benthic ecology identified in Chapter 10 of the ES is appropriate.
	There would be no permanent loss of *Sabellaria* reef as this is an ephemeral species which is likely to recolonise. *S. spinulosa* reef can be expected to colonise cable protection as an artificial substrate, in accordance with the UK Biodiversity Action Plan Priority Habitat Description for *S. spinulosa* Reefs (JNCC, 2016[1]): "*S. spinulosa* requires only a few key environmental factors for survival in UK waters. Most important seems to be a good supply of sand grains for tube building, put into suspension by strong water movement.... The worms need some form of hard substratum to which their tubes will initially be attached, whether bedrock, boulders, artificial substrata, pebbles or shell fragments."	Eastern IFCA agrees that *Sabellaria* could potentially recolonise where the substratum has recovered following works and where suitable artificial substratum is available.	It is agreed by both parties that *Sabellaria* could potentially recolonise where the substratum has recovered following works and where suitable artificial substratum is available.
	There would be no temporary habitat loss of *Sabellaria* reef if micro-siting is possible. If micro-siting is not possible the assessment identifies a low magnitude of effect and the effects would be temporary.	Eastern IFCA agrees with these statements so long as the works area is sufficiently far from reef identified and so long as the preconstruction surveys are	It is agreed by both parties that there would be no temporary habitat loss of *Sabellaria* reef if micro-siting is possible, noting potential for temporary loss

[1] http://jncc.defra.gov.uk/page-5706

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
	Given the localised and temporary nature of the works for Norfolk Vanguard, this is not comparable to long term commercial fisheries dredging and should therefore be permissible in the proposed bye-law areas.	undertaken close to the start of construction. The export cable corridor includes an area of *Sabellaria* reef, "Winterton Shoal", that Eastern IFCA intends to close to demersal fishing activity to protect the reef feature from damage. We do not consider it to be appropriate for electricity cables to be laid within this reef area because of the impacts on the reef feature. This area is not targeted by a high level of long-term dredging activities as outlined in the Norfolk Vanguard Limited position. It is currently targeted by a low level of inshore trawling activity. Eastern IFCA acknowledges that cable works will result in temporary disturbance to the seabed habitats, compared with potential repeated disturbance from fishing, but the disturbance from cable works will be at a greater magnitude within the affected area (deeper and wider, potentially including trenching, dredging and/or placement of artificial substrate) than the shallow abrasion from the sweep of an inshore trawl.	subject to the distance of works from *Sabellaria* reef. If micro-siting is not possible, there would be temporary habitat loss of *Sabellaria* reef in an area closed to demersal fishing to protect the reef feature.

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
	The impact significance conclusions of negligible or minor adverse on benthic ecology in Chapter 10 of the ES are appropriate.	Eastern IFCA defers to Natural England for formal conservation advice on the impacts of the offshore cable corridor on both sandbanks and *Sabellaria spinulosa* reefs.	Deferred to Natural England
	The conclusions of no adverse effect on the Haisborough Hammond and Winterton Special Area of Conservation (SAC) site integrity in the Information to Support HRA report (Document 5.3) are appropriate.	Eastern IFCA defers to Natural England for formal conservation advice on the impacts of the offshore cable corridor on both sandbanks and *Sabellaria spinulosa* reefs.	Deferred to Natural England
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate, this includes planned and licensed offshore wind farm and aggregate dredging activity The assessment of cumulative impacts on benthic ecology associated with the Norfolk Vanguard offshore cable corridor is based on the conclusions of Chapter 8 Marine Geology, Oceanography and Physical Processes of the ES, which states that theoretical bed level changes of up to 2 mm are estimated as a result of cumulative impacts of Norfolk Vanguard cable installation and dredging at nearby aggregate sites. This level of effect has no potential to affect benthos, including the Haisborough, Hammond and Winterton SAC, as stated in the Information to Support HRA report (Document 5.3). Projects and activities which were in existence at the time of undertaking the Norfolk Vanguard EIA existing environment characterisation are considered to be a component of the baseline and are therefore not included in the CIA as this would represent double counting of their effect. As outlined in Table 4 in respect of fish and shellfish ecology, consideration was given in the cumulative assessment to	Not agreed. Eastern IFCA does not agree that already installed infrastructure and practised licensed activities should not be included in the cumulative impact assessment. All possible cumulative impacts need to be assessed, regardless of whether an activity is already licensed, installed or otherwise. This should include, but not necessarily be limited to, planned and licensed wind farm and aggregate dredging activity in the southern North Sea. Many coastal and/or sedimentary marine habitats provide important spawning and nursery areas for a variety of marine species. Any disturbance to these habitats has the potential to negatively	The plans and projects to be considered in the CIA are not agreed.

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
	relevant fish and shellfish receptors, including those with spawning and nursery grounds in the area of the Project and those dependent on the presence of specific seabed habitats (i.e. sandeels, spawning herring). The assessment considered wide-scale cumulative impacts with a wide range of projects and activities across the Southern North Sea being included for assessment.	affect these populations. The inshore areas of the cable corridor are understood to support nursery grounds for thornback ray, herring, cod, whiting, mackerel, plaice and sole. Furthermore, the area supports spawning grounds for herring, sole and sandeels (Coull et al., 1998, Ellis et al., 2012). Although the evidence shows extensive spawning grounds for many species, Eastern IFCA is concerned about the scale of offshore activities in the Southern North Sea (particularly wind farm construction and aggregate extraction), and the cumulative effects this development could have on seabed fauna. Whilst we appreciate the difficulty in studying potential wide-scale impacts, we consider the issue does warrant further consideration. We defer to Natural England with regards to the impacts of a 2 mm change in bed level on Haisborough, Hammond and Winterton SAC.	
	The CIA methodology is appropriate.	Please see above comments	The CIA methodology is not agreed on the basis that the plans and projects to be

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
			considered in the CIA are not agreed.
	The cumulative impact conclusions of negligible or minor significance are appropriate.	Please see above comments, we do not consider appropriate conclusions can be drawn without considering all licenced activities occurring. Considerations should go beyond the anticipated in-combination effects with Norfolk Boreas and East Anglia THREE.	The CIA conclusions are not agreed on the basis that the plans and projects to be considered in the CIA are not agreed.
Mitigation and Management			
Mitigation and Management	A 50 m buffer from *S. spinulosa* reef is proposed for disposal of sediment in accordance with advice provided by Natural England by email on 13th February 2018.	Eastern IFCA defers to Natural England advice regarding measures that could be put in place to mitigate impacts of the offshore cable corridor on both sandbanks and *Sabellaria spinulosa* reefs.	Deferred to Natural England
	The Scour Protection and Cable Protection Plan will be updated as the final design of the project develops and must be agreed with the MMO prior to construction. This will include justification of the location and volume/area of essential cable protection based on crossing agreements and preconstruction surveys. In addition, a cable specification, installation and monitoring plan, must be agreed with the MMO. This includes a detailed cable laying plan, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques. This process gives the MMO and their advisors the opportunity to input to the cable laying plan, ensuring only essential works are permitted prior to construction.	Eastern IFCA defers to Natural England regarding measures that could be put in place to mitigate impacts of the offshore cable corridor on both sandbanks and *Sabellaria spinulosa* reefs. Eastern IFCA notes that cable protection works in Haisborough, Hammond and Winterton SCI are extremely undesirable, and are not in keeping with the East Marine Plans. Every effort should be made to maximise the length of cables that are buried and maintain burial over time. Using cable armouring instead of	Deferred to Natural England

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
	The development of these plans be informed by pre-construction survey data.	cable burial increases the likelihood of adverse environmental and fishery impacts. As in "Assessment Findings" section, Eastern IFCA would be concerned if cable works – including cable protection and reburial – were to be undertaken in an area closed to demersal fishing to protect sensitive seabed habitats. Eastern IFCA suggest that Sabellaria reef areas are avoided if possible in initial cable route selection, to avoid future impacts.	
	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.	Eastern IFCA defers to Natural England regarding measures that could be put in place to mitigate impacts of the offshore cable corridor on both sandbanks and *Sabellaria spinulosa* reefs.	Deferred to Natural England
Monitoring	The In Principle Monitoring Plan (Document 8.12), provides an appropriate framework to agree monitoring with the MMO.	Eastern IFCA defers to Natural England and the MMO on this matter	Deferred to Natural England

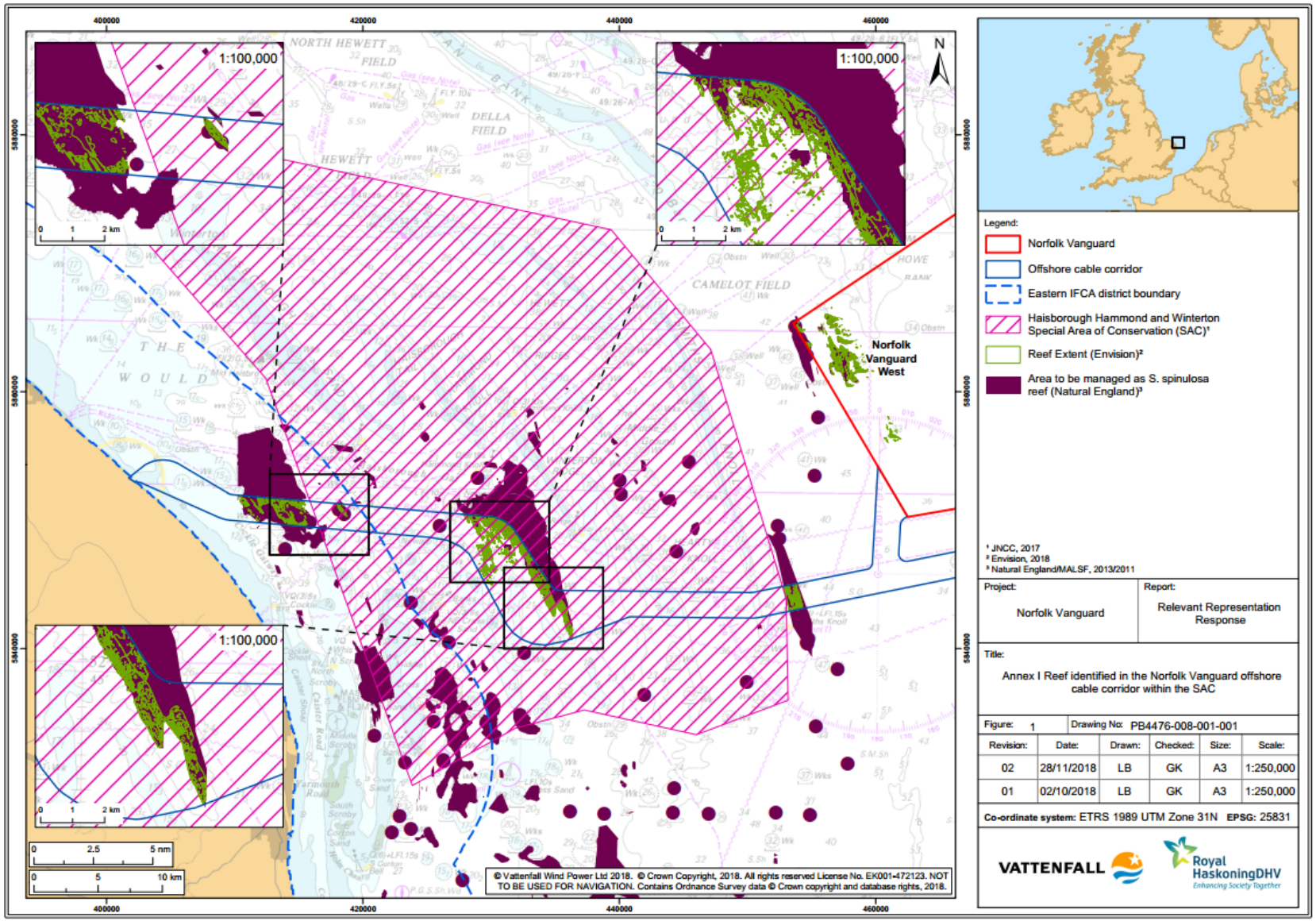

Figure 2.1 *Sabellaria* reef mapping by the Applicant and Natural England

2.2 Fish and Shellfish Ecology

21. 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.

22. Table 3 provides an overview of meetings and correspondence undertaken with the Eastern IFCA regarding Fish and Shellfish Ecology.

23. Table 4 provides areas of agreement (common ground) and disagreement regarding Fish and Shellfish Ecology.

Table 3 Summary of Consultation with Eastern IFCA

Date	Contact Type	Topic
Pre-Application		
11th March 2016	Letter from the Applicant	Formal launch of the project.
21st October 2016	Meeting	Introduction to the project and the Evidence Plan Process.
16th February 2017	Benthic and Intertidal Ecology, Fish Ecology, Marine Physical Processes and Marine Water and Sediment Expert Topic Group Meeting	Discussion on Scoping responses and approach to EIA/HRA.
11th December 2017	PEIR Response	Eastern IFCA response to the PEIR.
Post-Application		
14th September 2018	Relevant Representation	Concerns raised by the Eastern IFCA in relation to potential impacts on sandeels, particularly with regards to potential cumulative impacts with other projects/activities in the southern North Sea. Concerns also raised in relation to uncertainties around current knowledge of the impact of electromagnetic fields on elasmobranchs and shellfish species (i.e. edible crab and lobster), particularly in view of the proliferation of marine electricity cables off the East Anglian coast. In addition, the Eastern IFCA does not agree that already installed infrastructure and practised licensed activities should not be included in the cumulative assessment

Table 4 Fish and Shellfish Ecology

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
Environmental Impact Assessment			
Existing Environment	The ES adequately characterises the baseline environment in respect of Fish and Shellfish Ecology.	Agreed - receptors have been identified based on their commercial importance, location of spawning and nursery grounds, conservation importance and role within the North Sea food web.	It is agreed by both parties that the ES adequately characterises the fish and shellfish ecology baseline.
Assessment Methodology	The impact assessment methodology used in respect of Fish and Shellfish Ecology is appropriate.	Agreed	It is agreed by both parties that the EIA methodology used is appropriate.
	The list of potential impacts on Fish and Shellfish Ecology assessed is appropriate.	Agreed	It is agreed by both parties that the list of potential impacts considered in the assessment is appropriate.
Worst Case Scenario	The worst-case scenario used in the assessment for Fish and Shellfish Ecology is appropriate.	Agreed	It is agreed by both parties that the worst-case scenario used is appropriate.
Assessment Findings	The characterisation of receptor sensitivity is appropriate.	Agreed	It is agreed by both parties that the characterisation of receptor sensitivity is appropriate.
	The magnitude of effect is correctly identified.	Agreed	It is agreed by both parties that the magnitude of effect is correctly identified.
	The impact significance conclusions in respect of the assessment of the project alone on fish and shellfish ecology in general terms are appropriate.	Agreed	It is agreed by both parties that the conclusions of the assessment

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
			in respect of the project alone are appropriate.
	The impact significance conclusions in respect of the assessment of the project alone with regards to sandeels are appropriate.	Agreed	It is agreed by both parties that the conclusions in respect of the assessment of the project alone on sandeels are appropriate.
	As noted in the ES, the evidence available to date indicates that EMF related effects may cause short term, temporary reactions, when individuals are in close proximity of the cables, rather than resulting in a barrier to migration or long-term impacts upon feeding or confusion. Therefore, impacts above minor adverse significance in respect of EMFs are not to be expected on fish and shellfish receptors.	Eastern IFCA would agree with this statement based on the available literature at present however we would like to highlight that there are appreciable gaps in the scientific literature as to the potential effects of EMF emissions from subsea cables on marine fauna, and therefore there remain uncertainties in the ability of the Applicant to determine that there will be no adverse effects on fish and shellfish ecology.	It is agreed by both parties that the conclusions in respect of the assessment of impacts associated with EMFs are appropriate based on currently-available literature.
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate. These include a comprehensive range of proposals across the southern North Sea from early planning/scoping through to construction stages, including offshore wind farms and aggregate dredging areas. Projects and activities which were in existence at the time of undertaking the Norfolk Vanguard EIA existing environment characterisation are considered to be a component of the baseline and are therefore not included in the CIA as this would represent double counting of their effect.	Eastern IFCA considers that already installed infrastructure and licensed activities should be included in the CIA. All possible cumulative impacts need to be assessed, regardless of whether an activity is already licensed, installed or otherwise. This should include, but not necessarily be limited to, planned and licensed wind farm and aggregate dredging activity in the southern North Sea. Many coastal and/or sedimentary marine habitats provide important spawning and nursery areas for a variety of marine species.	Not agreed on the basis that the Eastern IFCA considers that already installed infrastructure and licensed activities should also be included in the CIA.

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
	Consideration was given in the cumulative assessment to relevant fish and shellfish receptors, including those with spawning and nursery grounds in the area of the Project and those dependent on the presence of specific seabed habitats (i.e. sandeels, spawning herring). The assessment considered wide-scale cumulative impacts with a wide range of projects and activities across the Southern North Sea being included for assessment.	Any disturbance to these habitats has the potential to negatively affect these populations. The inshore areas of the cable corridor are understood to support nursery grounds for thornback ray, herring, cod, whiting, mackerel, plaice and sole. Furthermore, the area supports spawning grounds for herring, sole and sandeels (Coull et al., 1998, Ellis et al., 2012). Although the evidence shows extensive spawning grounds for many species, Eastern IFCA is concerned about the scale of offshore activities in the Southern North Sea (particularly wind farm construction and aggregate extraction), and the cumulative effects this development could have on seabed fauna. Whilst we appreciate the difficulty in studying potential wide-scale impacts, we consider the issue does warrant further consideration.	
	The CIA methodology is appropriate.	Please see above comments	Not agreed on the basis that the Eastern IFCA considers that already installed infrastructure and licensed activities should also be included in the cumulative assessment.
	The assessment and conclusions of the CIA in respect of fish and shellfish ecology in general are appropriate.	Please see above comments	Not agreed on the basis that the Eastern IFCA considers that already installed infrastructure

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
			and licensed activities should also be included in the CIA.
	The assessment and conclusions of the CIA in ES Chapter 11 Fish Ecology in respect of sandeels are appropriate. Given the location of the project in relation to known key sandeel grounds in the southern North Sea, the potential contribution of the project to cumulative impacts on this species would be very small. Chapter 12 Marine Mammal Ecology assesses the inter-relationship with fish ecology in relation to changes to prey availability for marine mammals. The cumulative impact of changes to prey is deemed to be of minor significance for harbour porpoise and grey seal and negligible for harbour seal.	Eastern IFCA highlights the importance of sandeels as a prey species for harbour porpoise, a qualifying feature of the southern North Sea cSAC. Eastern IFCA defers to Natural England for formal conservation advice on this matter, however would like to highlight Eastern IFCA's concern about the scale of both licensed and planned offshore activities (particularly aggregate extraction and offshore wind farm construction) in the southern North Sea, because of cumulative effects these could have on seabed habitats, including those that support sandeels. Please see above comments with regards to the Eastern IFCA's views on including installed and licenced infrastructure and activities in the CIA.	Not agreed on the basis that the Eastern IFCA considers that already installed infrastructure and licensed activities should also be included in the cumulative assessment.
	The assessment and conclusions of the CIA in respect of electromagnetic fields are appropriate. As noted in the ES, the evidence available to date indicates that EMF related effects may cause short term, temporary reactions, when individuals are in close proximity of the cables, rather than resulting in a barrier to migration or long-term impacts upon feeding. This would apply both on a project specific and in a cumulative context.	Eastern IFCA is particularly concerned about the proliferation of marine electricity cables off the East Anglian coast and the potential – but very poorly understood – impacts of EMFs on marine life. Our current understanding would support the assessment; however, we would like to once again highlight that there are appreciable gaps in the scientific literature as to the potential effects of EMF emissions from subsea cables on marine fauna, and therefore	Not agreed on the basis that Eastern IFCA considers that already installed infrastructure and licensed activities should also be included in the cumulative assessment. In addition, Eastern IFCA would like to reiterate the appreciable gaps in the scientific literature in relation to the effects

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
		there remain uncertainties in the ability of the Applicant to determine that there will be no adverse effects on fish and shellfish ecology. Furthermore, Eastern IFCA considers that the CIA would need to assess the cumulative impact of Norfolk Vanguard with already installed and/or licenced cables	of EMF emissions. These would also apply in a cumulative context.

2.3 Commercial Fisheries

24. 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.

25. Table 5 provides an overview of meetings and correspondence undertaken with Eastern IFCA regarding Commercial Fisheries.

26. Table 6 provides areas of agreement (common ground) and disagreement regarding Commercial Fisheries.

Table 5 Summary of consultation with Eastern IFCA

Date	Contact Type	Topic
Pre-Application		
11th March 2016	Letter from the Applicant	Formal launch of the project.
31st May 2016	Email to the Eastern IFCA	Request for ports and information on fishing areas and seasonality.
11th December 2017	PEIR response	Eastern IFCA response to the PEIR.
Post-Application		
14th September 2018	Relevant Representation	The Eastern IFCA considers that displacement can have disproportionately large effects on inshore fisheries, which are characterised by small vessels operating within a short range from launch sites. In addition, the Eastern IFCA does not agree that already installed infrastructure and practised licensed activities should not be included in the cumulative assessment.

Table 6 Commercial Fisheries

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
Environmental Impact Assessment			
Existing Environment	The ES adequately characterises the baseline environment in terms of Commercial Fisheries.	Agreed	It is agreed by both parties that the ES adequately characterises the commercial fisheries baseline.
Assessment Methodology	The list of potential impacts on commercial fisheries assessed is appropriate.	Agreed	It is agreed by both parties that the list of potential impacts considered in the assessment is appropriate.
	The impact assessment methodology used in respect of commercial fisheries is appropriate.	Agreed	It is agreed by both parties that the impact assessment methodology used is appropriate.
Worst Case Scenario	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 is appropriate.
Assessment Findings	The characterisation of receptor sensitivity is appropriate. The increased sensitivity of the local inshore fleet to loss of fishing grounds and displacement has been appropriately identified in the ES.	The Eastern IFCA agree that the assessment of receptor sensitivity of the UK local inshore vessels as medium is appropriate and that the increased sensitivity of the inshore fleet has been taken into consideration. The Eastern IFCA highlights that whilst the level of fishing effort occurring inshore is much smaller than that applied by larger offshore fishing vessels, displacement can have disproportionately large effects on inshore fisheries,	It is agreed by both parties that the characterisation of receptors sensitivity is appropriate.

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
		which are characterised by small vessels operating within a short range from launch sites.	
	The magnitude of effect is correctly identified.	Agreed, Eastern IFCA once again highlights that displacement can have disproportionately large effects on inshore fisheries, which are characterised by small vessels operating within a short range from launch sites.	It is agreed by both parties that the magnitude of effect is correctly identified.
	The impact significance conclusions in respect of the assessment of loss of fishing grounds and potential for associated displacement on the local inshore fleet are appropriate.	Agreed	It is agreed by both parties that the impact significance conclusion in respect of the assessment of loss of fishing grounds and potential displacement on the local inshore fleet is appropriate.
Cumulative Impact Assessment (CIA)	The plans and projects considered within the CIA are appropriate. These include a comprehensive range of proposals across the southern North Sea and English Channel from early planning/scoping through to construction stages. Projects and activities which were in existence at the time of undertaking the Norfolk Vanguard EIA existing environment characterisation are considered to be a component of the baseline and are therefore not included in the CIA as this would represent double counting of their effect.	The Eastern IFCA considers that installed infrastructure and licensed activities should be included in the CIA. All possible cumulative impacts need to be assessed, regardless of whether an activity is already licensed, installed or otherwise. This should include, but not necessarily limited to, planned and licensed wind farm and	Not agreed on the basis that Eastern IFCA considers that installed infrastructure and licensed activities should be included in the CIA.

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
		aggregate dredging activity in the southern North Sea.	
	The CIA methodology is appropriate.	Please see above comments.	Not agreed on the basis that the Eastern IFCA considers that installed infrastructure and licensed activities should be included in the CIA.
	The assessment and conclusions of the CIA in respect of commercial fisheries in general are appropriate.	Please see above comments. We do not consider appropriate conclusions can be drawn without considering all operational and active licensed activities as well as planned projects.	Not agreed on the basis that the Eastern IFCA considers that installed infrastructure and licensed activities should be included in the CIA.
Mitigation and Management			
Mitigation and Management	The measures outlined in the ES to facilitate co-existence and adequate communication between the fishing industry and the Applicant are appropriate.	Agreed. The Eastern IFCA supports the use of a local Fisheries Liaison Officer (FLO), the Kingfisher information Service and Notice to Mariners to minimise disruption to fishers. This should occur alongside continuous communication with relevant fisheries managers (Eastern IFCA out to six nautical miles and the	It is agreed by both parties that the measures outlined in the ES to facilitate co-existence and adequate communication between the fishing industry and the Applicant are appropriate.

Topic	Norfolk Vanguard Limited position	Eastern IFCA position	Final position
		MMO and Defra (beyond six nautical miles) to ensure that mitigation considers the most up-to-date fisheries management measures.	

THE UNDERSIGNED AGREE TO THE PROVISIONS WITHIN THIS SOCG

Signed	
Printed Name	Julian Gregory
Position	Chief Executive Officer
On behalf of	Eastern Inshore Fisheries and Conservation Authority
Date	12th March 2019

Signed	R Sherwood
Printed Name	Rebecca Sherwood
Position	Norfolk Vanguard Consents Manager
On behalf of	Norfolk Vanguard Ltd (the Applicant)
Date	12 March 2019