



**Norfolk Vanguard Offshore Wind Farm** 

# Applicant's Comments on Deadline 8 Written Submissions

Appendix 1: Natural England Comments on the Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan

Applicant: Norfolk Vanguard Limited

Document Reference: ExA; Comments; 10.D9.1A

Deadline 9

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Photo: Kentish Flats Offshore Wind Farm





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# **Table of Contents**

1	Introduction1
2	Applicant's Comments on Additional Submissions2
2.1	General Comments2
2.2	Detailed Comments4
2.3	Comments on Table 3.1 – Worst Case Scenario in the HHW SAC8
2.4	Comments on Table 5.2 – Overview of Mitigation Commitments in the HHW SAC 10
2.5	Comments on Appendix 2: Interim Cable Burial Study11
2.6	Comments on Consideration of the Purpose of the Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan [REP7-058]





### 1 INTRODUCTION

1. This appendix contains the Applicant's responses to Natural England's submission "Comments on Outline Norfolk Vanguard Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan [REP7-026] and Consideration of the Purpose of the Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan [REP7-058]" at Deadline 8 of the Norfolk Vanguard Examination.





## 2 APPLICANT'S COMMENTS ON ADDITIONAL SUBMISSIONS

### **2.1** General Comments

Ref	Comment	Applicant's Response
1.1	Natural England welcomes the work undertaken by the Applicant to produce the Site Integrity Plan for Haisborough Hammond and Winterton Special Area of Conservation	Noted
1.2	Overall, we believe this document combined with the Grampian condition at DML 9 (1)(m) restricts the commencement of construction until such time that mitigation measures can be adopted to rule out AEol. We also acknowledge that the SIP commits the Applicant to providing a robust evidence base and mitigation measures for which they can be held to account. But due to ongoing concerns with cable protection within the site, even with the 5% reduction in cable protection, the regulators should be aware that these commitments may still be considered insufficient	The Applicant notes that Condition 9(1)(m) of the Transmission Deemed Marine Licences (DMLs) allows a conclusion of no Adverse Effect on Integrity (AEoI) to be made at this stage, as construction cannot commence until the Marine Management Organisation (MMO) is satisfied that there would be no AEoI of the Haisborough Hammond and Winterton (HHW) Special Area of Conservation (SAC).  The Outline HHW SAC SIP (document 8.20) states if it cannot be agreed with the MMO that there would be no AEoI of the HHW SAC, construction could not commence and the onus would be on the Applicant to consider alternative
		solutions. For example, this could include: minor amendments to the redline boundary in discrete areas where the cable route interacted with reef to provide space for micrositing; or a variation to the Transmission DML Condition 9(1)(m) to allow a finding of AEoI should the project satisfy the HRA Assessment of Alternatives, Imperative Reasons of Overriding Public Interest (IROPI) and Compensatory Measures tests.
		The HHW SAC SIP provides a framework to consider the potential effects on Annex 1 habitats and sufficiency of mitigation in consultation with the MMO and Natural England based on the finding of the pre-construction surveys and available evidence prior to construction.
1.3	Therefore, based on the best available evidence at this time and a valid worst case scenario as set out in the SIP Natural England remains of the view that there is a high probably of an AEoI on integrity of Haisborough, Hammond and Winterton SAC Annex I sandbanks and reef features both alone and in combination. Therefore	As stated above, the HHW SAC SIP provides a framework to consider the potential effects on Annex 1 habitats and sufficiency of mitigation in consultation with the MMO and Natural England based on the finding of the pre-





Ref	Comment	Applicant's Response
	we are unable to agree with the conclusions within the Habitats Regulation Assessment	construction surveys and available evidence prior to construction.
		Condition 9(1)(m) of the Transmission Deemed Marine Licences (DMLs) allows a conclusion of no Adverse Effect on Integrity (AEoI) to be made at this stage, as construction cannot commence until the MMO is satisfied that there would be no AEoI of the Haisborough Hammond and Winterton (HHW) Special Area of Conservation (SAC).
1.4	Natural England would welcome further consideration on the significance of small scale impacts to the site and potential (more robust) mitigation measures.  As set out previously it is not possible to assess the parameters of 'where possible' under the Habitat Regulations. The Annex I reef mitigation is designed to ensure the complete avoidance of an Annex I reef (define within a specific area/boundary. Therefore the current SIP is contradictory in places as it is identified that not all impacts will be avoided/fully mitigated. Please note that Natural England is of the view that the project impacts are not <i>de minimis</i> .	Section 4.2.3 of the Outline HHW SAC SIP (document 8.20), shows that consideration will be given to the scale of effects, in accordance with Natural England's Advice note regarding consideration of small scale habitat loss within SACs in relation to cable protection, submitted at Deadline 4.  Diagram 5.1 of the Outline HHW SAC presents the decision process regarding whether micrositing is possible and shows that construction cannot commence unless the MMO is satisfied, in consultation with Natural England, that there will be no AEoI.
1.5	Natural England notes that at Figure 4.1 of the SIP Annex I reef is shown to straddle the length of the cable corridor. Therefore in this scenario mitigation in the form of micrositing will not be possible. It is stated in the SIP that if an AEoI can't be removed then alternative options would be taken forwards like a new Marine Licence or DCO variation, but it is not explicitly clear what the purpose of this would be. We assume that it would be to alter the red line boundary to enable the avoidance of Annex I reef?	Figure 4.1 of the Outline HHW SAC SIP shows areas to be managed as reef which have been identified by Natural England as having potential to support Sabellaria spinulosa reef, noting that reef in the HHW SAC is currently deemed by Natural England to be in unfavourable condition. The HHW SAC SIP provides the process for agreeing a route through areas to be managed as reef, as well as micrositing to avoid reef recorded during the pre-construction.
1.6	We suggest that it would be prudent for the Applicant to consider other mitigation options to ensure that the project can be appropriately assessed. Options for potentially restricting the activities to a one off activity (with requirement for a future marine licence for further Operation & Maintenance work) and/or potential compensation options.	The HHW SAC SIP provides a framework which allows different mitigation options to be considered, including sandwave levelling to minimise the potential need for reburial (see also the response to Ref 3.4)  Table 5.1 of the Outline HHW SAC SIP outlines various studies proposed by the Applicant to inform the final SIP with regards to refining mitigation options and minimising the potential for reburial.





Ref	Comment	Applicant's Response
1.7	Natural England has also reviewed REP7-058 'Purpose of the HHW SIP position statement' and our advice provide at Deadline 6 [REP6-032] remains unchanged. A worst case scenario for benthic impacts can be assessed and unlike with the Southern North Sea SIPs, its content and permission is not dependent on the parameters of other projects. Therefore, Natural England wishes to make it clear to the Applicant and Regulators that it is not appropriate for any future projects within the same 'benthic' designated site to rely upon a SIP at the consenting stage to discharge Habitat Regulations requirements for an in-combination assessment. The only exception to this may be Norfolk Vanguard Sister Project, Norfolk Boreas, depending the Application submitted.	The Applicant notes NE's position that it is not appropriate for any future projects within the HHW SAC to rely upon a SIP at the consenting stage, with the exception of Norfolk Boreas.  Norfolk Vanguard and Norfolk Boreas are owned by Vattenfall and the HHW SAC SIP (document 8.20) states that mitigation for Norfolk Vanguard must consider the requirements for Norfolk Boreas to ensure the mitigation measures for both projects are aligned.
1.8	Natural England suggest that the Applicant should produce a summarised list detailing conditions / documents that will be provided prior to construction.	Section 7 of the HHW SAC SIP (document 8.20) submitted at Deadline 9 includes a summary of the studies that will be undertaken to inform the final HHW SAC SIP.
1.9	Please note that whilst the current document focuses on the Annex I habitats with HHW SAC there are areas of good quality Sabellaria spinulosa reef bordering the SAC, which are priority habitats under Section 40 of the NERC Act 2006 that will also be impacted by cable installation. We advise that these areas are avoided.	The HHW SAC SIP relates only to Annex 1 habitats within the HHW SAC. The cable route outside the HHW SAC would be agreed with the MMO through the Cable Specification, Installation and Monitoring Plan in accordance with the Conditions of the DMLs. This gives the MMO and their advisors the opportunity to input to the cable laying plan including the cable route.

### 2.2 Detailed Comments

Ref.	Section / Para	Comment	Applicant's Response
2.1	12 onwards	There is no consideration of the current unfavourable condition of the site.	Paragraph 16 of the Outline HHW SAC SIP (document 8.20) states "In their submissions to the Norfolk Vanguard examination, Natural England has advised that a recent condition assessment of the features within HHW SAC has been undertaken which is currently unpublished. Based on this, it is Natural England's latest view that the Annex 1 Reef and Sandbank features are in unfavourable condition and need to be restored to favourable condition. This is reflected in Natural England's Supplementary Advice Targets outlined in Table 1.1."
2.2	Section 1.3	Natural England welcomes the condition, but we would advise that a Worst Case Scenario (WCS) can be considered at this	A worst case scenario has been assessed in the Information to Support HRA report (document 5.3), however





Ref.	Section / Para	Comment	Applicant's Response
		time. It is not appropriate to defer consideration of uncertainties on the permanency of the impact and achievability of mitigation measures to post consent. Unlike with the Southern North Sea SAC where the in-combination assessment is dependent of factors outside the control of the project and there are several options to mitigate the impacts, this is not the case for benthic SACs.  As set out at the Issue Specific Hearings on 27th and 28th March 2019, Natural England is mindful of the time constraints once the Contract For Difference (cfd) is agreed and therefore how will the Applicant ensure that the regulator and their advisers pre construction won't be put under undue pressure to resolve an HRA issue to enable a project to meet their desired timeframes at the potential detriment of the SAC features?	this is subject to change based on the nature and extent of <i>S. spinulosa</i> reef at the time of construction (which is outside of the Applicant's control) and therefore the HHW SAC SIP provides a framework to reconsider the effects and agree mitigation with the MMO in consultation with NE.  As stated in the Outline HHW SAC SIP, if it cannot be agreed that there would be no AEoI, construction cannot commence and the onus would be on Norfolk Vanguard Limited to consider alternative solutions, in consultation with Natural England and the MMO.
2.3	28	Natural England welcomes the commitment from the Applicant to submit a final detailed SIP at least 6 months prior to construction.	The Outline HHW SAC SIP (document 8.20) submitted at Deadline 9 has been updated to cross reference the DMLs following the Examining Authorities dDCO Schedule of Changes (PD-017) which changed the timescale of this condition from six to four months. This change to the Outline HHW SAC SIP ensures consistency with the final DCO, in accordance with a request by the MMO.
2.4	45.	Natural England seek clarification as to what mitigation is suggested if not avoidance of reef? The Applicant seeks to identify mitigation measures post consent by suggesting that a conclusion of no AEol can be made at the consenting stage as the wording of the Transmission DMLs states that construction cannot commence until the MMO is satisfied, in consultation with Natural England, that there is 'no adverse effect beyond reasonable scientific doubt'. However, Natural England has reservations about this approach it is kicking it down the road.	The HHW SAC SIP provides a framework to consider the potential effects on Annex 1 habitats and sufficiency of mitigation in consultation with the MMO and Natural England based on the finding of the pre-construction surveys and available evidence prior to construction. This allows the mitigation to be tailored depending on the findings of the pre-construction surveys in relation to the extent of reef present. As stated above, if it cannot be agreed with the MMO that there would be no AEoI, construction cannot commence and the onus would be on Norfolk Vanguard Limited to consider alternative solutions, in consultation with Natural England and the MMO. For example, this could include: minor amendments to the order limits in





Ref.	Section / Para	Comment	Applicant's Response
			discrete areas where the cable route interacted with reef to provide space for micrositing; or a variation to the Transmission DML Condition 9(1)(m) to allow a finding of AEoI should the project satisfy the HRA Assessment of Alternatives, IROPI and Compensatory Measures tests.
2.5	46	Whilst Natural England agrees that the byelaw only legally restricts bottom towed fishing gear they also apply to the overall management of the feature and therefore apply to all activities within HHW SAC which may impact on this management trying to achieve favourable condition of the Annex 1 Reef feature within the site. This therefore applies to Norfolk Vanguard. Please see our response at Deadline 6 for detailed information [REP6-032].	The byelaw areas do not apply to all activities within HHW SAC. The Eastern Inshore Fisheries and Conservation Agency (IFCA) stated in their Deadline 7 submission that "Eastern IFCA is developing management in the form of a byelaw to close Sabellaria reef areas to bottomtowed fishing within HHW SAC" and "IFCAs do not have powers to regulate activities other than fishing." In addition, and as discussed in Appendix 2 of the Applicant's Written Summary of Oral Submissions: Issue Specific Hearing 6 (Proposed Fisheries Management Areas – Norfolk Vanguard position statement, document reference ExA; ISH6; 10.D7.1A) the DEFRA draft Joint Recommendation for the HHW SAC (dated October 2016) made under the Common Fisheries Policy relates only to restrictions on fishing activities, and particularly on the use of certain types of fishing gear. In particular paragraph 1.1 of the supporting information notes: "Commercial fishing has been identified as an activity which could adversely impact the integrity of the sites' features and as such requires being assessed and, if necessary, managed to reduce its impact." and "Existing licensed activities that take place within Haisborough, Hammond and Winterton MPA will continue to be managed in line with the relevant legislation and application processes by the competent authorities."  The Applicant agrees with the MMO's position submitted at Deadline 6 that, "irrespective of the byelaws, this issue is related to the need to appropriately assess the impacts to the HHW SAC prior to making a determination. The





Ref.	Section / Para	Comment	Applicant's Response
			data underpinning the byelaw could be included as part of this assessment."  Section 4.1 of the Outline HHW SAC SIP (document 8.20) discusses the areas to be managed as reef that underpin the proposed fisheries closures. These areas are given consideration in the mitigation section (Section 5 of the Outline HHW SAC SIP).
2.3	81. – 86.	<ul> <li>Where will the disposal areas be?</li> <li>How can it be guaranteed that the sediment will remain in the system and that the dredge material will be &gt;95% similar in particle size to disposal locations?</li> <li>As stated in our Deadline 7 response [REP7-075] Natural England suggest that the SIP should contain criteria that the disposal locations within the SAC should meet to ensure that any sediment will remain within the system, to ensure that the dredge material will be &gt;95% similar in particle size to disposal locations whilst ensure that there is no interaction with Annex 1 reef. Natural England continue to suggest that the disposal volumes should be split according to type of material, for example drill arisings, boulders, sand and mud. This is important because different materials have different impacts and those impacts have been assessed based on maximum volumes as provided in the ES.</li> <li>Also the maximum volumes taken within the Haisborough, Hammond and Winterton SAC should be detailed separately to ensure the impacts to the designated site remain within the impacts assessed. The wording should also limit the area of impact from removal of substances for disposal to the area assessed.</li> </ul>	<ul> <li>Natural England requested through the Evidence Plan Process that sediment disposal should not be undertaken within 50m of <i>S. spinulosa</i> reef. Due to the ephemeral nature of <i>S. spinulosa</i> reef, the findings of the pre-construction surveys are required in order to identify the disposal locations.</li> <li>The Haisborough, Hammond and Winterton SAC is not a closed system and it presently has sediment both entering and leaving it around the boundaries. The proposed works are some distance from the boundaries of the SAC (at over 6 km from the southern boundary) and are unlikely to bring about any disruption to the transport regime. Therefore, the movement in and out of the HHW SAC as occurs at present will continue, irrespective of the proposed dredging or disposal activities as discussed in Information to Support HRA report Appendix 7.1 ABPmer Sandwave Study.</li> <li>Section 5.4 of the Outline HHW SAC SIP (document 8.20) shows that the location(s) and methodology for disposal must be agreed with the MMO in consultation with Natural England before works can commence. Therefore, the Applicant considers that further details are not required at this stage, as the HHW SAC SIP provides the framework to agree the details of sediment disposal. The Applicant is aware that Natural England has proposed wording with regards to a condition "to ensure that the dredge material will be &gt;95% similar in particle size to disposal locations" in their Deadline 9 submission. The Applicant notes</li> </ul>





Ref.	Section / Para	Comment	Applicant's Response
			that this condition is based on the Aggregates industry (as stated by Natural England in response to Q20.147 of the ExA's Further Written Questions, submitted at Deadline 4). As discussed in the Applicant's Comments on Responses to the ExA's Further Written Questions submitted at Deadline 5 (document reference ExA; FurtherWQ; 10.D5.2), the Applicant does not consider that a condition comparable to that applied to the aggregates industry would be appropriate or proportionate as this relates to dredging of sediment to be used in a different location. For Norfolk Vanguard, the Applicant has committed to disposing of sediment arising from the HHW SAC back into the SAC to ensure that there is no net loss of sediment from the SAC system. The Applicant also suggests that a condition of this nature is unprecedented in the offshore wind industry.  • Section 5.4 of the Outline HHW SAC SIP submitted at Deadline 9 includes the area of impact from dredging as requested by Natural England.

### 2.3 Comments on Table 3.1 – Worst Case Scenario in the HHW SAC

Ref.	Section / Para	Comment	Applicant's Response
Const	truction		
3.1	Temporary physical disturbance Annex 1 Sandbank	Natural England note that the Applicant states in Table 3.1 that the figure provided of 2.4km² in relation to temporary physical disturbance to Annex 1 Sandbank from cable installation is based on maximum potential disturbance width of 30m for a 10m wide plough with 10m of spoil either side of the trench, along 80km of export cable trenching within the SAC. Therefore when the area is mapped the Applicant will need to identify a 30m	The HHW SAC SIP provides a framework to review the area of impact on Annex 1 habitat based on the findings of the pre-construction survey and as the final design of the cable route and installation methods develop.



Ref.	Section / Para	Comment	Applicant's Response
		wide channel containing no Sabellaria spinulosa.	
3.2	Temporary physical disturbance Annex 1 Sandbank	Natural England advises that any disposal areas must either be agreed now and identified in the SIP, or a separate Marine Licence is required.	As discussed above, Natural England has stated that disposal should not be within 50m of <i>S. spinulosa</i> reef and therefore the location cannot be determined until the pre-construction surveys have been completed to determine the location of reef. The disposal of sediment has been assessed in the Information to Support HRA report on the basis of this mitigation and the HHW SAC SIP commits the Applicant to agreeing the location and methodology for sediment disposal with the MMO. Therefore, the Applicant maintains that disposal should be included in the DMLs and not subject to a separate Marine Licence unless the location and method cannot be agreed with the MMO at the post consent stage.
3.3	Temporary physical disturbance	Please note for other projects a worst case scenario has been based on the known areas within the corridor at the	A worst case scenario has been assessed in the Information to Support HRA report (document 5.3).
Opera	on Annex 1 Reef	time of consenting.	It is recognised that other offshore wind farms have been permitted to route cables through SACs without the need for a SIP, however lessons learned from these wind farms, as reflected in Natural England's "Offshore wind cabling: ten years' experience and recommendations" (provided in document reference: ExA; ISH6; 10.D7.11, submitted at Deadline 7), have shown that there was uncertainty in relation to the cable installation, although the level of uncertainty was not fully understood at the consenting stage which has, thereafter, resulted in a requirement for consent variations. The HHW SAC SIP therefore reflects the Applicant's commitment to learn and improve on the position of previous projects.
	ı	Diagra note there no de to be a	Section F 2 shows that the sale
3.4	Temporary physical disturbance on Annex 1 Sandbank	Please note there needs to be a commitment that if pre sweeping is undertaken then either the reburial allowance is reduced or is considered under a separate Marine Licence.	Section 5.3 shows that the cable installation method, including the potential for pre-sweeping must be agreed with the MMO in consultation with Natural England.





Ref.	Section / Para	Comment	Applicant's Response
			Section 5.6.2 of the Outline HHW SAC SIP shows that reburial works must also be agreed with the MMO in consultation with Natural England.  The HHW SAC SIP therefore provides the opportunity for the MMO in consultation with Natural England to review the reburial allowance if pre sweeping is undertaken.
3.5	Temporary physical disturbance on Annex 1 Reef	Natural England advise that consideration should be given over the full lifetime of the project. Natural England suggest that it would be much better to note that if reef develops over cables then there is a high probability that recovery will happen in that location.	Section 2.3 "Project life" of the Outline HHW SAC SIP (document 8.20) states "There will be an ongoing requirement to review and consult on the need for works associated with the maintenance of cables within the HHW SAC."
3.6	Persistent habitat loss on Annex 1 Sandbank	As set out previously Natural England remains concerned about the ongoing impacts to Annex I habitats from the placement of cable protection within a designated site. Even if it is permanent change in the interest features over the lifetime of the project it is considered to be a lasting impact. Please see our deadline 6 response on small scale impacts [REP6-032]	Section 4.2.3 of the Outline HHW SAC SIP (document 8.20) states that the scale of loss will be considered in the final SIP in accordance with Natural England's advice note regarding consideration of small scale habitat loss within SACs in relation to cable protection, submitted at Deadline 6.
3.7	Permanent habitat loss of Annex 1 Reef	Natural England seek clarification from the Applicant as to whether they are committing to micro route around Annex 1 Reef or if the Applicant is still stating that micro routing will occur 'where possible' as this is unclear from the wording in the SIP.	The HHW SAC SIP provides a framework to review the potential for micrositing and the scale of impact if micrositing is not possible, based on the findings of the pre-construction survey and as the final design of the cable route and installation methods develop.
			Diagram 5.1 of the Outline HHW SAC presents the decision process regarding whether micrositing is possible and shows that construction cannot commence unless the MMO is satisfied, in consultation with Natural England, that there will be no AEoI.

# 2.4 Comments on Table 5.2 – Overview of Mitigation Commitments in the HHW SAC

Ref.	Comment	Applicant's Response
4.1	Natural England note that the Applicant has stated in Table 5.2 that the total area and	An error in the initial draft provided to Natural England has been corrected to 32,000m <sup>2</sup> and
	volume of cable protection in the SAC will not exceed 32,000m2 and 20,800m3, respectively.	20,800m³ in the version submitted to the Examination. The values in the Outline HHW SAC





Ref.	Comment	Applicant's Response
	This is a significant increase from the figures stated previously of 26,000m2 and 15,400m3.  Natural England would therefore seek clarification as to why these figures have changed.	SIP submitted at Deadlines 7 and 9 are consistent with the Applicant's commitment to reduce the cable protection contingency from 10% to 5%, and include the worst case scenario for cable crossings. Therefore these values represent a significant reduction from the values assessed in the Environmental Statement (ES) and Information to Support HRA report.
4.2	Natural England seek clarification as to why cable reburial has been removed from Table 5.2?	Reburial has been included in Table 5.2 in the Outline HHW SAC SIP (document 8.20) submitted at Deadline 9.

# 2.5 Comments on Appendix 2: Interim Cable Burial Study

Ref.	Comment	Applicant's Response
5.1	Whilst Natural England welcomes the production of this document, we advise that this note does not alter our current advice as provided above.	See the Applicant's responses to comments above.
5.2	Natural England would expect the Applicant to produce something more similar to that produced at Deadline 5 for Hornsea Project Three.	Hornsea Project THREE submitted an Outline Cable Specification and Installation Plan during their examination. The Applicant has committed to producing a cable specification, installation and monitoring plan in accordance with Condition 9(1)(g) of the Transmission DMLs. The Interim Cable Burial Study was provided by the Applicant to inform the Outline HHW SAC SIP and the requirement for a cable protection contingency.
5.3	In addition Natural England would flag that the Applicant will need to ensure that any such document is continually revised as further evidence is produced.	The Interim Cable Burial Study was provided to inform the Outline HHW SAC SIP and the requirement for a cable protection contingency. A Cable Burial Risk Assessment will be undertaken to inform the final HHW SAC SIP, as discussed in Section 5.3 and Section 7 of the Outline HHW SAC SIP (document 8.20) submitted at Deadline 9.

# 2.6 Comments on Consideration of the Purpose of the Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan [REP7-058]

Ref.	Comment	Applicant's Response
6.1	Please note, in light of the submission of this document Natural England's advice as provided at Deadline 6 remains unchanged [REP6-032].	The Applicant provided a response to Deadline 6 submissions at Deadline 7 (document reference ExA; Comments; 10.D7.20).