

# Norfolk Boreas Offshore Wind Farm Applicant's Comments on Deadline 9 Submissions and Other Submissions

Applicant: Norfolk Boreas Limited  
Document Reference: ExA.ASR.D10.V1  
Deadline 10

Date: May 2020  
Revision: Version 1  
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*Photo: Ormonde Offshore Wind Farm*

Date	Issue No.	Remarks / Reason for Issue	Author	Checked	Approved
05/05/2020	01D	First draft for internal review	DT/CD/MT/JT	VR/EV	
06/05/2020	01F	Final draft for Deadline 10 submission	DT/CD/MT/JT	VR/EV	JL



## Table of Contents

<b>1</b>	<b>Applicant’s Comments on Deadline 9 Submissions.....</b>	<b>5</b>
<b>1.1</b>	<b>REP9-031 Breckland Council.....</b>	<b>6</b>
<b>1.2</b>	<b>REP9-032 Cawston Parish Council.....</b>	<b>9</b>
<b>1.3</b>	<b>REP9-033 Oulton Parish Council .....</b>	<b>10</b>
<b>1.4</b>	<b>REP9-034 MMOs Written Response.....</b>	<b>11</b>
<b>1.5</b>	<b>REP9-035 MMO’s Comments on Responses to ExA Third Written Questions.....</b>	<b>16</b>
<b>1.6</b>	<b>REP9-036 MMO’s Response to Norfolk Vanguard Secretary of State Consultation ..</b>	<b>18</b>
<b>1.7</b>	<b>REP9-037 Natural England’s Cover letter .....</b>	<b>24</b>
<b>1.8</b>	<b>REP9-038 Natural England’s response to DCO documents .....</b>	<b>24</b>
<b>1.9</b>	<b>REP9-039 Natural England’s comments on Outline Norfolk Boreas Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan and Cable Specification, Installation and Monitoring Plan.....</b>	<b>28</b>
<b>1.10</b>	<b>REP9-040 Natural England’s comments on Additional information for the HHW SAC position paper .....</b>	<b>34</b>
<b>1.11</b>	<b>REP9-041 Natural England’s comments on Norfolk Boreas Position Statement on Derogation .....</b>	<b>39</b>
<b>1.12</b>	<b>REP9-042 Natural England’s response to Applicant’s Comments on Responses to the Examining Authority’s Third Round of Written Questions .....</b>	<b>45</b>
<b>1.13</b>	<b>REP9-043 Natural England’s comments on Additional information to the HHW SAC position paper- Annex 2 Cable Protection Decommissioning Evidence.....</b>	<b>50</b>
<b>1.14</b>	<b>REP9-044 Natural England’s comments on Assessment of Additional Mitigation in the Haisborough, Hammond and Winterton Special Area of Conservation (Version 2) .....</b>	<b>53</b>
<b>1.15</b>	<b>REP9-045 Natural England’s Norfolk Boreas Position Statement Regarding Mitigation and Compensation.....</b>	<b>60</b>
<b>1.16</b>	<b>REP9-047 Comments on Norfolk Boreas In Principle Habitats Regulations Derogation, Provision of Evidence - Appendix 1 Flamborough and Filey Coast SPA In Principle Compensation .....</b>	<b>75</b>
<b>1.17</b>	<b>REP9-047 Comments on Norfolk Boreas In Principle Habitats Regulations Derogation, Provision of Evidence - Appendix 2 Alde-Ore Estuary SPA In Principle Compensation Measures .....</b>	<b>76</b>
<b>1.18</b>	<b>REP9-048 Natural England’s comments on In Principle Habitats Regulations Derogation, Provision of Evidence - Appendix 3 Haisborough, Hammond and Winterton SAC.....</b>	<b>77</b>
<b>1.19</b>	<b>REP9-049 Natural England’s Updated Offshore Ornithology Advice.....</b>	<b>79</b>
<b>1.20</b>	<b>REP9-052 RSPB Response to the Offshore Ornithological Assessment Updates (Project Alone and Project Cumulative &amp; In combination Collision Risk Modelling) and Report on the Implications for Ecological Sites.....</b>	<b>81</b>

<b>1.21</b>	<b>REP9-053 The Wildlife Trusts Response on Article 6(4) and Cabling Impacts .....</b>	<b>89</b>
<b>1.22</b>	<b>REP9-054 Colin Kings Deadline 9 submission.....</b>	<b>91</b>
<b>1.23</b>	<b>REP9-055 Lucy Sheringham Deadline 9 submission .....</b>	<b>92</b>
<b>1.24</b>	<b>REP9-058 Natural England’s Risk and Issues log .....</b>	<b>93</b>
<b>1.25</b>	<b>REP9-059 North Norfolk District Council Response to the Examining Authority’s Third Round of Written Questions REP7-072 .....</b>	<b>94</b>
<b>1.26</b>	<b>REP8-036 Norfolk County Council Response to the Examining Authority’s third round of written questions .....</b>	<b>103</b>
<b>REFERENCES 115</b>		
	<b>Appendix 1 Figure 1 from Natural England’s submission to the Norfolk Vanguard Examination [REP6-032] .....</b>	<b>116</b>
	<b>Appendix 1 Figure 2 from Appendix 2.2 of Natural England’s Relevant Representation [RR-099]. Blue hatching shows the proposed fisheries closure .....</b>	<b>117</b>

## Glossary of Acronyms

AEoI	Adverse Effect on Integrity
DCO	Development Consent Order
dDCO	Draft Development Consent Order
DML	Deemed Marine Licences
dDML	Draft Deemed Marine Licence
EIA	Environmental Impact Assessment
ES	Environmental Statement
ExA	Examining Authority
HHW	Haisborough, Hammond and Winterton
HRA	Habitats Regulations Assessment
IPMP	In Principle Monitoring Plan
Kj	Kilojoules
MMO	Marine Management Organisation
MoU	Memorandum of Understanding
NE	Natural England
NSIP	Nationally Significant Infrastructure Project
OASIS	Online Access to the Index of Archaeological Investigations
OMP	Operations and Maintenance Plan
OOOMP	Outline Offshore Operations and Maintenance Plan
OWF	Offshore Wind Farm
SAC	Special Area of Conservation
SIP	Site Integrity Plan
SNCB	Statutory National Conservation Bodies
SoCG	Statement of Common Ground
SoS	Secretary of State
UK	United Kingdom
UXO	Unexploded Ordnance
WSI	Written Scheme of Investigation

## 1 Applicant's Comments on Deadline 9 Submissions

1. This document contains the Applicant's comments on submissions by Interested Parties at Deadline 9 of the Norfolk Boreas Examination.

## 1.1 REP9-031 Breckland Council

Summary of Submission	Applicant's Comments
<b>Response to the Examining Authorities Third Round of Written Questions</b>	
<p><u>Q3.5.3.5 – Requirement 15: Scenarios, stages and phases of authorised development onshore</u></p> <p>Submit any comments on NNDC's suggestions, the Applicant's response and/ or whether you would want to see some or all of NNDC's suggestions incorporated in R15.</p> <p><u>Breckland Council Response:</u></p> <p>Breckland Council has nothing to add to this point. It is content for discussions to take place as part of the ongoing PPA discussions. Any variations to timings and the differing scenarios can be agreed between the applicant and the relevant LPA.</p>	<p>Noted and the Applicant will continue to discuss the PPA with the relevant planning authorities.</p>
<p><u>Q3.5.7.2 – Table of requirements, discharge authorities and consultees and discharge process map</u></p> <p>Provide any comments on NNDC's Timetable of requirements, discharge authorities and consultees and the Discharge process map [REP6-043, Appendix B and Appendix C].</p> <p><u>Breckland Council Response:</u></p> <p>Breckland Council has nothing to add to this point. It is content for the discussions to take place as part of the ongoing PPA discussions. The DCO Requirements and Discharge Process Map submitted by NNDC are helpful but are not agreed by all LPAs' and remove the ability to discuss the requirements and processes dependent on the outcome of the examination. It is a good starting point but does not need to be part of the DCO.</p>	<p>Noted and as detailed in the Applicant's response to ExA Q3.5.7.1 [REP7-017] and ExA Q4.5.7.1 [ExA.WQ-4.D10.V1] the Applicant is in agreement with Breckland Council that the documents should not be secured in the DCO.</p>
<p><u>Q3.5.7.4 – Schedule 16</u></p> <p>Parties to submit any additional information to assist the ExA in reaching its recommendation to the SoS.</p> <p><u>Breckland Council Response:</u></p> <p>Breckland Council has nothing further to add.</p>	<p>Noted.</p>



Summary of Submission	Applicant's Comments
<p><u>Q3.5.7.5 – Planning Performance Agreements</u></p> <p>Provide any update on matters since the response to responses to further written questions provided by the Applicant [REP6-014, responses to Q2.5.7.1].</p> <p><u>Breckland Council Response:</u></p> <p>Breckland Council is content with the response provided by the Applicant at their Deadline 8 response.</p>	<p>The Applicant welcomes Breckland Council's response.</p>
<p><u>Q3.9.6.5 – Design and Access Statement: further comments</u></p> <p>Further to comments at Deadline 5, the SoCG between the Applicant and the NFU [REP6-032] and Breckland Council's future role which would be responsible for post consent approvals:</p> <ol style="list-style-type: none"> <li>1. Provide any comments on the DAS submitted at Deadline 5 [REP5-013] to [REP5- 017].</li> <li>2. Provide any views on any of the points in the two questions above and/ or any further points you consider should be included or amended.</li> </ol> <p><u>Breckland Council Response:</u></p> <p>Breckland Council is content with the DAS (REP5-13 – REP5-17). This is set out in the SoCG dated April 2020 and submitted for Deadline 9. It has no further comments to make on the DAS.</p>	<p>The Applicant welcomes Breckland Council's agreement on the updates made in the DAS [REP7-005].</p>
<p><u>Q3.9.6.7 – Future approvals</u></p> <ol style="list-style-type: none"> <li>1. How would you ensure the right skills to engage in the design process (as set out in REP5-013, Plate 4) and to consult, amend if necessary and approve would be available to the Council?</li> <li>2. Do you have any further comments on the DAS wording regarding future engagement [REP5-013, para 72] whereby you and the Applicant would determine which stakeholders would be engaged in the design process in light of the information in the Design Guide?</li> <li>3. Is there anything further you would wish to see incorporated regarding Scenario 1, where the Norfolk Vanguard substations may have preceded the design process described in the DAS for the Norfolk Boreas proposed development?</li> </ol>	<ol style="list-style-type: none"> <li>1. The Applicant will continue to engage with the relevant planning authority on the discharge process.</li> <li>2. The Applicant will continue to work collaboratively with Breckland Council on future stakeholder engagement, as detailed and secured in the DAS [RE7-005].</li> <li>3. Noted</li> </ol>



Summary of Submission	Applicant's Comments
<p><u>Breckland Council Response:</u></p> <ol style="list-style-type: none"> <li>1. Breckland Council has considered the design process as set out at Plate 4 in REP5-013. It has no comments to make on the process. It would work with the applicant to identify the required resources and secure funding through the PPA process to engage consultants to work with the Council and the applicant to work through the design process and provide advice to the Council through the planning process.</li> <li>2. The Council considers that it would be helpful if the applicant had to agree with the Council the stakeholders that would be part of any engagement process and not just consult with them. It is clear from paragraphs 68 – 75 that the applicant recognises the need to work collaboratively with the Council.</li> <li>3. The Council has nothing to add to this point.</li> </ol>	
<p><u>Q3.12.2.3 – Enhanced Mitigation</u></p> <p>The Outline Code of Construction Practice (OCoCP) version 3 [REP5-011, para 131], refers to potential requirement for enhanced mitigation to be identified for specified receptors.</p> <ol style="list-style-type: none"> <li>1. North Norfolk DC and other discharging authorities to comment if “potential requirement” should be strengthened, and if so, propose wording.</li> </ol> <p><u>Breckland Council Response:</u></p> <p>Breckland Council has no comment to make.</p>	Noted
<p><u>Q3.12.2.5 – Enhanced Mitigation</u></p> <ol style="list-style-type: none"> <li>1. North Norfolk DC and other discharging authorities, should the OCoCP [REP5-011, section 9.1.2.2] include a commitment for noise barrier locations to be agreed with relevant local planning authorities?</li> <li>2. Should there be a commitment for the assessment of the impact of noise barriers be carried out in consultation with the relevant local planning authorities?</li> <li>3. Applicant to comment.</li> </ol> <p><u>Breckland Council Response:</u></p> <ol style="list-style-type: none"> <li>1. Yes</li> <li>2. Yes</li> </ol>	The Applicant refers to its response provided to Q3.12.2.5 [REP7-017] on these issues and has updated the OCoCP (Version 4) submitted at Deadline 8 [REP8-003].

Summary of Submission	Applicant's Comments
3. N/A	
<p><u>Q3.15.0.8 – Attenuation capacity at substations allowance for climate change</u></p> <p>The Flood Risk Assessment [APP-586] para 229 states that ‘the outline drainage design’ includes capacity for attenuation of 40% above that required for the 1 in 100 year event (i.e. provides a 20% margin of safety beyond a 20% allowance for climate change) but the OODP [APP-712] only refers to 20% proposed allowance for climate change, which appears to have been conceded by Norfolk CC as Lead Local Flood Authority in SoCG [REP6-035] on the basis of a 35-year operational life of the development. The Applicant to explain:</p> <ol style="list-style-type: none"> <li>1. how at the end of the operational life of the development the infiltration rate of the entire footprint of the project substations and the National Grid substation extension will in practice be restored to the same as the present-day and how this is secured by the DCO;</li> <li>2. how risks discussed in [REP6-035] of SuDS drainage features performing suboptimally if designed for additional capacity could be mitigated by design and management in order to maintain the 40% additional aggregate attenuation capacity during operation that was included in the FRA. The Environment Agency, Water Management Alliance and Breckland Council are asked to comment on this proposed relaxation from the 40% figure that was included in the Flood Risk Assessment, in relation to both the project substation and the National Grid substation.</li> </ol> <p><u>Breckland Council Response:</u></p> <p>Breckland Council will rely on the expertise of Norfolk County Council as the Lead Local Flood Authority and the Environment Agency to comment on this matter.</p>	<p>The Applicant notes this response.</p>

## 1.2 REP9-032 Cawston Parish Council

2. The Applicant will respond to Cawston Parish Councils Deadline 10 submissions at Deadline 11.

### 1.3 REP9-033 Oulton Parish Council

Summary of Submission	Applicant's Comments
Comment on Applicant's responses at Deadline 7	
<p>OPC notes the Applicant's response at deadline 7 relating to the error on Link 75, regarding the omission of employee traffic movements, and that the revised traffic movements are now stated as: 92 all traffic/72 HGVs in scenario 2.</p>	<p>The Applicant confirms this error was corrected in the OTMP (Version 4), Appendix 1 [REP8-009] submitted at Deadline 8.</p>
<p>OPC raise concerns over impacts of the project as being referred to as "temporary", as impacts will be for years (not weeks or months). OPC also raised concerns over the lack of coordinated planning of this and other projects and the inability of the NSIP planning process to adequately assess their cumulative impacts.</p> <p>OPC consider that the proposed road mitigations will not reduce massively increased traffic going past the Old Railway Gatehouse or potential for delays to the local community when peak cumulative traffic is accessing the Street.</p> <p>OPC have also raised concerns over the effectiveness of the propose community engagement.</p>	<p>The Applicant has assessed the potential cumulative impacts of Norfolk Boreas, Norfolk Vanguard and Hornsea Project Three within the Environmental Statement and has identified mitigations where potential significant impacts could occur.</p> <p>Furthermore Norfolk Boreas will continue to engage and coordinate with Hornsea Project Three to minimise potential effects and as detailed in the OCoCP Section 2.4 (Version 5, submitted at Deadline 10):</p> <p><i>'In the event that Norfolk Boreas and Hornsea Project Three have concurrent construction works in the vicinity of Oulton and Cawston parishes, the Norfolk Boreas communication plan will set out the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Procedures for engaging with Hornsea Project Three;</i></li> <li>• <i>Procedures for Norfolk Boreas and Hornsea Project Three to engage with the Highway Authority; and</i></li> <li>• <i>Measures that Norfolk Boreas and Hornsea Project Three will initiate if any complaints are made by the local community which provide how these are communicated between the two developers.'</i></li> </ul> <p>The Applicant refers to the response to ExA Q4.12.2.1 [ExA.WQ-4.D10.V1] with regards to the Old Railway Gatehouse.</p> <p>The Applicant is committed to ensure effective and open communication with local residents and business that may be affected by the construction works. A designated Norfolk Boreas Limited local community liaison officer will respond to any public concerns, queries or complaints in a professional and diligent manner as set out by a project community and public relations procedure.</p>

## 1.4 REP9-034 MMOs Written Response

Summary of Submission	Applicant's Comments
<b>3. Comments in Deadline 7 and 8 documents</b>	
<p><b>Outline In Principle Monitoring Plan (IPMP) (REP7-011/012)</b> 3.1.1 The MMO welcomes the amendments to include Haisborough, Hammond and Winterton (HHW) Special Area of Conservation (SAC) monitoring within the IPMP.</p>	The Applicant notes this and has no further comment to make.
<p><b>Proposed Sediment Disposal Sites Site Characterisation Report (REP7-013)</b> 3.2.1 The MMO welcomes the required update to the Site Characteristic Report and confirms that no further updates to the document are required.</p>	The Applicant notes this and has no further comment to make.
<p><b>Applicant Submissions REP7-024 to REP7-031</b> 3.3.1 The MMO notes that these submissions are the same documents (with only minor changes) submitted for Norfolk Vanguard Project in response to the SoS letter for further information. 3.3.2 The MMO supports Natural England's (NE) role as the Statutory Nature Conservation Body (SNCB) within the planning process for National Significant Infrastructure Projects (NSIP). 3.3.3 The MMO defers to NE in relation to Habitats Regulations Assessment and any relevant mitigation and compensation for features within the Flamborough and Filey Coast Special Protection Area (SPA) and the Alde-Ore Estuary SPA, and Haisborough, Hammond and Winterton (HHW) Special Area of Conservation (SAC).</p>	The Applicant notes the MMO's comments and wishes to clarify that the minor changes the MMO refer to relate only to the proposal to deliver certain compensation measures strategically with Norfolk Vanguard, and therefore consideration as to whether the proposed compensation is appropriate for the combined effects of Norfolk Boreas and Norfolk Vanguard.
<p><b>Note on requirements (REP5-005)</b> The MMO wishes to highlight that the Note on Requirements does not include the SoS as a discharging authority in Section 2. If Schedule 19 (compensatory measures) is included, for completeness this will need to be updated. Any other updates related to the ongoing developments will need to be updated in any relevant documents as required.</p>	The Applicant's firm view is that there is no adverse effect on integrity from the Project either alone or in-combination with other plans or projects. A derogation case, and the associated in-principle compensatory measures, have been provided entirely without prejudice to this position. Given this, it is not appropriate to amend the Note on Requirements to include the mechanism which would secure compensation as suggested by the MMO. The purpose of the Note on Requirements is to clearly show the inter-relationship between the relevant Requirements and outline plans onshore, and the relevant DML conditions and associated plans offshore, where there are a number of related Requirements/ conditions and plans. It is not

Summary of Submission	Applicant's Comments
	intended to refer to compensatory measures (in the event that compensation is required by the Secretary of State). In any event, this is not necessary for the compensatory measures where it is clear which plans are referred to and these are limited in number and have no inter-relationship to other Requirements/ conditions or plans.
<b>4. Closed issues at Deadline 9</b>	
<p><b>End of Construction</b></p> <p>4.1.1 The MMO has continued discussions through the SoCG with the Applicant in relation to the condition the MMO proposed in REP7-039. The MMO acknowledges the Applicant's concerns and after further internal discussions can confirm that the MMO does not require an additional condition or any updates to the DCO.</p>	The Applicant notes this and has no further comment to make.
<p><b>Updating documents at the End of Examination</b></p> <p>4.2.1 The MMO has reviewed Schedule 18 and Part 2 is well structured and clearly shows the final version of the document that should be used once consent is granted, therefore we are content with this section.</p> <p>4.2.2 The MMO believes Part 1, Section 'Examination documents forming part of the environmental statement' needs further clarity on what part of the application the updated examination documents link to. The MMO believes adding in the name of the Application Environmental Statement Chapters and documents as well as the Application Document No. in column 1 would provide this clarity and show what else would need to be reviewed in addition to the updated documents when reviewing at post consent stages.</p> <p>4.2.3 The MMO understands the Applicant has agreed to this amendment and will be updating the dDCO for Deadline 10. The MMO welcomes this update and has no further comments provided the updates to Part 1 of the document are made.</p>	The amendments requested by the MMO have been included in the dDCO submitted at Deadline 10 [Document 3.1, version 7].
<p><b>Marine Mammal Monitoring</b></p> <p>4.3.1 The MMO has continued discussions with the Applicant and NE and all parties have now agreed on updating condition 18 and condition 20 of Schedules 9 and 10. Please refer to the MMO comments on the Applicant's response to Q3.2.0.1 in EN010087-MMO-Comments-on-ExA-3WQs-Responses-Final for details on the amendments.</p>	The agreed conditions have been included in the dDCO submitted at Deadline 10 [Document 3.1, version 7].

Summary of Submission	Applicant's Comments
<p><b>4.4 Particle Size Analysis</b></p> <p>4.4.1 The MMO understands that the Applicant, NE and the MMO are in agreement that the conditions proposed for particle size analysis for the Norfolk Vanguard project are not suitable.</p> <p>4.4.2 The MMO understands the Applicant does not believe that a condition is required due to the additional mitigation for disposal of material within the HHW SAC, set out within the HHW SAC control document (Site Integrity Plan (SIP) or Cable Specification, Implementation and Monitoring Plan (CSIMP)). The MMO highlights that the SIP approach is not agreed between the MMO and the Applicant – see section 5.4.</p> <p>4.4.3 The MMO notes that NE still require a condition or to have some commitment secured to guarantee the disposal of material will be in an area with similar particle size to ensure disposal of sediment does not fundamentally change the habitat of the disposal location.</p> <p>4.4.4 The MMO is continuing to work with the Applicant and NE to come to a final position during examination.</p> <p>4.4.5 However, if the final position is that there is no solution or no agreement can be reached and the SoS decides it would be appropriate to add a condition then the MMO considers that the condition would need to meet the five tests and above all be clear and precise enough to be enforceable.</p>	<p>The Applicant would like to make it clear that this mater relates to the request by Natural England that a condition should be added to the DCO to ensure that within the HHW SAC disposed sediment should be of 95% similar particle size to the seabed on which it would be deposited. Natural England have also advised that this is applied to the Norfolk Vanguard and Hornsea 3 projects.</p> <p>The Applicant considers the MMO statement to be a fair and accurate reflection of the current position on this issue, noting that the Applicant provided justification on why such a condition is not appropriate in its comments on Relevant Representations [AS-024] and during ISH4 [REP4-014], then provided further clarity on its position on the matter when commenting on the MMO's response to question Q3.2.0.2 [REP8-015].</p> <p>The Applicant discussed this further with the MMO and Natural England on 28<sup>th</sup> April 2020. However no progress was made and all parties agree that the precise drafting of any condition, and indeed whether a condition should be included at all, will depend on the outcome of the SoS's determination of Hornsea Project Three and Norfolk Vanguard. As such it is not possible to advance this issue further during the Norfolk Boreas Examination. This is reflected in the Statement of Common Ground with Natural England submitted at Deadline 10 [ExA.SoCG-17.D10.V4].</p>
<p><b>CSIMP</b></p> <p>4.5.1 The MMO welcomes the CSIMP and related condition as an alternative route to capture all information required at post consent stage and is content with the principle and the mechanism behind the CSIMP.</p> <p>4.5.2 Notwithstanding this, the MMO has concerns that approval of the CSIMP could result in the need for further consideration of Adverse Effect on Integrity by the MMO, leading to potential delay regarding the sign off of this document and note that this is a risk for the Applicant.</p>	<p>As stated in the SoCG with the MMO [REP9-023]</p> <p><i>“Both parties agree with the principle and mechanism for the CSIMP. Whilst further consideration of AEoI may be required prior to discharge of the CSIMP condition, and this could lead to potential delay, the MMO acknowledge their role in this respect.”</i></p>
<p><b>5. Outstanding Issues</b></p>	
<p>The MMO welcomes the continued discussions with the Applicant through the SoCG to come to agreement where possible, if no agreement is made the final position has been highlighted within the SoCG. The MMO has the following outstanding issues that will not change before the end of examination.</p>	<p>The Applicant had further discussions with the MMO and Natural England on 28<sup>th</sup> of April 2020, however all parties are in agreement that on these three issues (discussed in the rows below) there will be no further progress made</p>

Summary of Submission	Applicant's Comments
	<p>during the Norfolk Boreas Examination and they will be for the Secretary of State to determine.</p>
<p><b>Timeframes</b></p> <p>5.2.1 The MMO note further comments have been provided by the Applicant in Table 5.5 of REP8-015 and these include referring to Condition 15(5) (Schedule 9-10), Condition 9(5) (Schedule 11-12), and Condition 7(5) (Schedule 13) which allows the ability for the parties to agree to an extension in writing. The MMO understands this point, but still has concerns that the Applicant may not be willing to grant extensions due to construction timelines and potential costs.</p> <p>5.2.2 The MMO has provided detailed comments on the concerns on timeframes within RR-069. To summarise the MMO believes that to ensure there are no delays to the signing off of documents that could impact the developer, 6 months is the appropriate timescale to deal with any issues that may occur at post consent stage.</p>	<p>The Statement of Common Ground submitted at Deadline 9 [REP9-023] contains details on the position of both parties with respect to timeframes. The Applicant considers that the four month time frame conditioned within the DMLs is appropriate and proportionate to allow the MMO, in consultation with statutory bodies, sufficient time for stakeholder consultation and the provision of comments, whilst ensuring no unnecessary delay to the commencement of development and completion of construction works.</p> <p><i>As stated, the final position of the SoCG "Although the parties disagree on the length of the time frames for providing documents, the parties do both agree that it should be the Secretary of State who decides whether 4 months or 6 months is included in the final DCO."</i></p>
<p><b>Arbitration and Appeals</b></p> <p>5.3.1 The MMO continues to believe that any additional mechanism is not required to be included in the DCO/DMLs and that judicial review is the appropriate mechanism.</p> <p>5.3.2 The MMO has provided detailed comments in the Norfolk Vanguard Ltd and MMO Joint Position Statement - Arbitration and Appeal Mechanisms detail submitted with documents RR-069 and Appendix 3 of AS-025.</p>	<p>The Statement of Common Ground submitted at Deadline 9 [REP9-023] contains details on the position of both parties with respect to arbitration and appeals.</p> <p>The Applicant considers that a clear mechanism is required and that full justification for this is provided in the Statement of Common Ground submitted at deadline 9 [REP9-023].</p> <p><i>As stated in the final position of the Statement of Common Ground: The parties agree that there should be consistency in the arbitration and appeals approach across Norfolk Vanguard and Norfolk Boreas. The parties are therefore content for the Secretary of State to apply the same approach to Norfolk Boreas as that which is decided for Norfolk Vanguard.</i></p>
<p><b>HHW SAC SIP</b></p> <p>5.4.1 The MMO does not agree with the Applicant that the use of the SIP and the Grampian condition is a suitable mechanism to manage the uncertainty the Applicant has laid out on the cable route and location of Annex I habitat.</p>	<p><i>As stated throughout the examination (for example in the HHW SAC position paper [REP5-057]) the Applicant proposed the SIP as a mechanism for the MMO (along with Natural England) to control activities and therefore effects of the project on the HHW SAC. The Applicant considered that at the conclusion of the Norfolk Vanguard examination the concept of the HHW SIP was agreed and therefore adopted the same approach.</i></p>



Summary of Submission	Applicant's Comments
<p>5.4.2 The MMO believes there is a fundamental difference in the need for a SIP between the impact alone within the HHW SAC and for the in-combination noise impact within the Southern North Sea (SNS) SAC. The MMO notes that where a project has been assessed regarding impacts of noise in the SNS SAC, project impacts alone can be clearly identified, assessed and the possible mitigation to be used described, which all parties can have confidence in. The only uncertainty within the SNS SAC is the in combination impacts with other projects. The SIP was specifically utilised for that type of uncertainty and where the confidence in the proposed mitigation has been agreed by all parties.</p> <p>5.4.3 The MMO understands that it is not the Applicant's aim to delay an Appropriate Assessment to be conducted by the SoS with either of the proposed HHW control documents (SIP/CSIMP) however the MMO believes the SIP is not the appropriate route to take – further comments are provided within the SoCG.</p> <p>5.4.4 The MMO believes it is a matter for the SoS, in light of NE's comments and the information provided by the Applicant, to determine whether sufficient information is available to conclude for certainty that there is no AEol at consenting stage.</p>	<p>The Applicant does not consider that the use of the SIP and Grampian condition for the HHW SAC is any different to the concept and principle of using a site integrity plan for the Southern North Sea SAC (SNS SAC). In both cases, it will not be known until construction whether any impacts will actually arise in practice. The fact that this relates to in-combination piling impacts in the case of the SNS SAC, or to the extent of recovery of the Annex I <i>S. spinulosa</i> reef in the case of the HHW SAC is immaterial. In both cases a number of mitigation measures are proposed by the Applicant and, in the case of the HHW SAC, irrespective of the extent of reef recovery in the intervening period, the Applicant considers that the impacts will be <i>de minimis</i> and will not impede the restore objective.</p> <p>The Applicant considers that due to the ephemeral nature of Annex I <i>S. spinulosa</i> reef at the time of construction the SIP approach is appropriate. Further justification of the HHW SIP and associated condition is provided within the HHW SAC position paper [REP5-057] and the SoCG [REP9-023]. However, as stated in the SoCG "<i>Both Parties agree that the SoS should be consistent in its decision making and the use of the SIP/CSIMP and associated conditions.</i>"</p> <p>Neither the SIP or the CSIMP seeks to defer Appropriate Assessment at the consenting stage. A full Information to support Habitats Regulations Assessment (HRA) Report has been provided with the application [APP-201] which concludes that there is no adverse effect on integrity (AEol). Whilst it is correct that the final number and precise route of the cable has yet to be determined, the HRA has been undertaken on the basis of a worst case scenario.</p> <p>The Applicant has demonstrated that assessment of the worst case scenario, considered on the basis of the best information currently available, and the likelihood that this information will not change prior to construction, enables an AEol to be ruled out at the stage of consent determination. In the event</p>

Summary of Submission	Applicant's Comments
	<p>that new information becomes available between consent determination and construction (i.e. during the discharge of relevant DML conditions) which would alter the assessment undertaken at the consent determination stage, the MMO will be required to take this into account before discharging any dML conditions in the usual way. This is no different to the MMO's role in undertaking any other Appropriate Assessment which is required before arriving at any determination (i.e. the grant of a Marine Licence) which may have an adverse effect on the integrity of a European site. This is an integral and usual part of the MMO's role as regulator of marine activities.</p> <p>Accordingly, for the reasons outlined above and within the HHW SAC position paper [REP5-057], the Applicant considers that there is sufficient certainty for the Secretary of State to be able to conclude no AEoI at the consenting stage.</p>

## 1.5 REP9-035 MMO's Comments on Responses to ExA Third Written Questions

Summary of Submission	Applicant's Comments
<p>2.0 Offshore benthic and marine mammals</p> <p>The MMO have provided the wording of the agreed condition for marine mammal monitoring</p>	<p>The Applicant notes the MMO's comments on the Applicant's response to written question Q3.2.0.1 and is content that this is a fair reflection of the current position. The revised conditions have been included within the version of the draft DCO which has been submitted at Deadline 10 [Document 3.1, version 7].</p>
<p>5. Development Consent Order and Deemed Marine Licences. The MMO has commented on the Applicant's Written Question Q3.5.5.1 – Timeframes</p>	<p>As described in section 1.4, further information on the Applicant's and the MMO's position on this matter is provided in the Statement of Common Ground submitted at Deadline 9 [REP9-023]. The Applicant is in agreement with the MMO that this matter should be determined by the Secretary of State.</p>
<p>8.3 Haisborough, Hammond and Winterton SAC</p> <p>The MMO highlights its concerns that should the Secretary of State decide that the CSIMP should be used this could result in the need for further consideration of</p>	<p>The Applicant has produced a full Information to support Habitats Regulations Assessment (HRA) Report within the application [APP-201] which concludes that there is no adverse effect on integrity (AEoI). Whilst it is correct that the</p>

Summary of Submission	Applicant's Comments
<p>Adverse Effect on Integrity by the MMO post consent, leading to potential delay regarding the sign off of this document.</p>	<p>final number and precise route of the cable has yet to be determined, the HRA has been undertaken on the basis of a worst case scenario.</p> <p>The Applicant has demonstrated that assessment of the worst case scenario, considered on the basis of the best information currently available, and the likelihood that this information will not change prior to construction, enables an AEoI to be ruled out at the stage of consent determination.</p> <p>In the event that new information becomes available between consent determination and construction (i.e. during the discharge of relevant DML conditions) which would alter the assessment undertaken at the consent determination stage, as stated in the Statement of Common Ground submitted at Deadline 9 [REP9-023], the Applicant considers that the MMO as the regulatory body for marine activities would be the competent authority and therefore the appropriate body to conduct such an assessment. This is no different to the MMO's role in undertaking any other Appropriate Assessment which is required before arriving at any determination (i.e. the grant of a Marine Licence) which may have an adverse effect on the integrity of a European site. This is an integral and usual part of the MMO's role as regulator of marine activities.</p> <p>As also stated in the final position of the CSIMP section of the SoCG <i>"Both parties agree with the principle and mechanism for the CSIMP. Whilst further consideration of AEoI may be required prior to discharge of the CSIMP condition, and this could lead to potential delay, the MMO acknowledge their role in this respect."</i></p>

## 1.6 REP9-036 MMO's Response to Norfolk Vanguard Secretary of State Consultation

Summary of Submission	Applicant's Comments
General comments	
<p>1.1 The MMO would like to thank the Applicant for the continuous consultation and including the MMO in all discussions relating to the request for further information by the Secretary of State (SoS) (dated 6 December 2019).</p> <p>1.2 The MMO believes the positive, open and constructive nature of these discussions to address potential issues has enabled all parties to work efficiently and effectively in producing the final response documents.</p>	<p>The Norfolk Boreas team were involved in many of the consultations to which the MMO refer. This engagement has heavily influenced various submissions made by the Applicant to the Norfolk Boreas Examination, especially the derogation documents [REP7-024, REP7-025, REP7-026, REP7-027 and REP7-028].</p>
2. Ornithology	
<p>The MMO support Natural England's (NE) role as the Statutory Nature Conservation Body (SNCB) within the planning process for National Significant Infrastructure Projects (NSIP). The MMO defers to NE in relation to Habitats Regulations Assessment and any relevant mitigation and compensation for features within both the Flamborough and Filey Coast Special Protection Area (SPA) and the Alde-Ore Estuary SPA.</p>	<p>The Applicant acknowledges the MMO's position with respect to Habitats Regulations Assessment and that these are deferred to Natural England. The Applicant also notes that Norfolk Boreas has made the same commitment to increasing the minimum turbine draught height made at Norfolk Vanguard in order to minimise potential collision impacts.</p>
3. Haisborough, Hammond and Winterton (HHW) Special Areas of Conservation (SAC) SIP and HHW SAC Cable Specification, Installation and Monitoring Plan (CSIMP)	
<p>3.1 The MMO has reviewed both the HHW Site integrity Plan (SIP) and the new proposal by the applicant of an alternative condition and the document HHW SAC CSIMP. The MMO welcomes the Applicant's continued development to try and alleviate the MMO concerns.</p> <p>3.2 The MMO support NE's role as the SNCB within the planning process for NSIPs. The MMO defers to NE in relation to Habitats Regulations Assessment and any relevant mitigation and compensation for features within the HHW SAC.</p> <p>3.3 The MMO has previously raised concerns on the use of the HHW SAC SIP as a mechanism due to the nature of the Grampian condition. The MMO believes the CSIMP captures and secures all the required information and mitigation, however has concerns that the updated CSIMP could potentially still lead to a requirement to review the site features at post consenting stage. This could possibly cause significant resourcing issues and project delays at post consent stage.</p>	<p>The most recent positions of both parties with regards to the Norfolk Boreas SIP and Norfolk Boreas CSIMP are provided in the Statement of Common Ground submitted at Deadline 9 [REP9-023]. In summary:</p> <ul style="list-style-type: none"> <li>• The CSIMP and the HHW SIP are both outline documents fully describing the current mitigation proposed and both of these documents are certified documents (8.20) under Article 37 and Schedule 18 of the dDCO.</li> <li>• Neither approach seeks to defer Appropriate Assessment at the consenting stage. A full Information to support Habitats Regulations Assessment (HRA) Report has been provided with the application [APP-201] which concludes that there is no adverse effect on integrity (AEoI).</li> </ul>

Summary of Submission	Applicant's Comments
<p>...</p> <p>3.5 In the circumstances of this case the MMO believes it is a matter for the SoS, to determine in light of NE's comments and the information provided by the Applicant, whether sufficient information is available to conclude for certainty that there is no Adverse Effect on Integrity at consenting stage.</p>	<ul style="list-style-type: none"> <li>• Whilst it is correct that the final number and precise route of the cable has yet to be determined, the HRA has been undertaken on the basis of a worst case scenario.</li> <li>• The Applicant has sought to demonstrate that assessment of the worst case scenario, considered on the basis of the best information currently available, and the likelihood that this information will not change prior to construction, enables an AEoI to be ruled out at the stage of consent determination.</li> <li>• In the event that new information becomes available between consent determination and construction (i.e. during the discharge of relevant DML conditions) which would alter the assessment undertaken at the consent determination stage, the MMO will be required to take this into account before discharging any dML conditions in the usual way. This is no different to the MMO's role in undertaking any other Appropriate Assessment which is required before arriving at any determination (i.e. the grant of a Marine Licence) which may have an adverse effect on the integrity of a European site. This is an integral and usual part of the MMO's role as regulator of marine activities.</li> </ul> <p>Accordingly, for the reasons outlined above and within the HHW SAC position paper [REP5-057], the Applicant considers that there is sufficient certainty for the Secretary of State to be able to conclude no AEoI at the consenting stage.</p>
<p>3.4 The MMO notes the EC Guidance Document on Article 6(4) of the Habitats' Directive 92/43/EEC states that a proposal put forward under Article 6 (4) should be 'the least damaging for habitats, for species and for the integrity of the Natura 2000 site, regardless of economic considerations, and that no other feasible alternative, exists that would not affect the integrity of the site.'</p>	<p>The Applicant is aware of this guidance and it has been taken into consideration within the Applicant's derogation case and compensatory measures documents [REP7-024 and REP7-027 respectively].</p>
<p>4. Particle size condition</p>	
<p>4.1 The MMO understands that the Applicant, NE and the MMO are in agreement that the conditions proposed for particle size analysis are not suitable.</p>	<p>The positions of all parties (the MMO, NE and Norfolk Vanguard) are consistent with those on the Norfolk Boreas project. Further information on</p>

Summary of Submission	Applicant's Comments
<p>4.2 The MMO understands the Applicant does not believe that a condition is required due to the additional mitigation for disposal of material within the HHW SAC, set out within the HHW control document (SIP/SCIMP). The MMO notes that NE still require a condition or to have some commitment secured to ensure the disposal of material will be in an area with similar particle size to ensure disposal of sediment does not fundamentally change the habitat of the disposal location.</p> <p>4.3 The MMO believes that if the SoS decides it would be appropriate to add a condition then the condition needs to meet the five tests and above all be clear and precise enough to be enforceable.</p>	<p>this matter can be found in the Applicant's Responses to the Examining Authority's Fourth Round of Written Questions [ExA.WQ-4.D10.V1], question Q4.2.0.2, the Applicant's comments on responses to the Third round of written questions [REP8-015] and the Statement of Common ground with Natural England submitted at Deadline 10 [ExA.SoCG-17.D10.V4].</p>
5. Marine Mammals	
<p>5.1 The MMO has no further comments on the potential to update Condition 14(1)(f) of Schedules 9 and 10 and condition 9(1)(f) of Schedules 11 and 12 or Condition 14(1)(m) of Schedules 9 and 10 and Condition 9(1)(l) of Schedules 11 and 12 to the proposed conditions in comments 9 of the SoS Section 107 letter.</p>	<p>The Applicant is cognisant of changes proposed by the Secretary of State to condition 14 of the Norfolk Vanguard DMLs to include <i>vibro-piling</i> or <i>'blue hammer'</i>. However, the Applicant understands that this change is not supported by Natural England, the MMO or Norfolk Vanguard Limited and therefore such a change is not considered appropriate for the Norfolk Boreas project.</p>
6. Part 4 Condition 9(12) of Schedules 9 and 10, and Condition 4(12) of Schedules 11 and 12 – notice of cable exposure	
<p>6.1 The MMO has spoken to the Maritime and Coastguard Agency in relation to their response and understands that the following wording has now been agreed by all parties: (12) In case of exposure of cables on or above the seabed, the undertaker must within <del>five</del> three days following identification of a potential cable exposure, <del>the receipt by the undertaker of the final survey report from the periodic burial survey,</del> notify mariners by issuing a notice to mariners and by informing Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO and MCA within five days.</p>	<p>This wording was included in the Norfolk Boreas draft DCO submitted at Deadline 5 [REP5-004] to reflect the changes agreed (between the Applicant and the MCA) as part of the Norfolk Vanguard draft DCO.</p>

Summary of Submission	Applicant's Comments
7. DCO Schedule 17	
<b>Please note that the equivalent Schedule in the Norfolk Boreas DCO is Schedule 19</b>	
<p>7.1 The MMO has been involved in discussions with the Applicant and NE in relation to securing additional mitigation and any compensation measures and how such measures could be captured in the dDCO and Deemed Marine Licences (DMLs).</p> <p>7.2 The MMO welcomes the measures introduced by the Applicant to significantly reduce the potential impact of Norfolk Vanguard on the Marine Protected Areas; HHW SAC, Alde-Ore Estuary SPA and Flamborough and Filey Coast Special Protection Area.</p> <p>7.3 The MMO believes that all of the additional mitigation proposed by the Applicant at the post examination stage has been secured throughout the DCO and DMLs through multiple conditions and plans.</p>	<p>The Applicant has been party to the majority of the discussions and has also adopted all mitigation measures proposed by Norfolk Vanguard and secured these in the same way as Norfolk Vanguard.</p>
<p>7.4 The MMO considers that, in accordance with the 2017 UK Conservation of Habitats and Species Regulations (“the Habitats Regulations”), any appropriate compensation measures should be secured prior to consent. Following consultation with NE, the MMO understands that, where sufficient amendments to the Project could not be identified, appropriate compensation measures have not been agreed for all the remaining, potentially impacted, marine protected areas identified by the Secretary of State.</p> <p>7.5 The MMO notes that for the remaining compensation measures, Schedule 17 proposes that: No later than 12 months prior to the commencement of any offshore works the details of the compensation must be submitted to the Secretary of State for approval. The MMO understands that compensation measures do not necessarily have to be delivered and in place, but that under the Habitats Regulations, all necessary legal, technical, financial and monitoring arrangements should be secured to ensure the compensatory measures are able to proceed as agreed and remain in place over the required timescales before consent is granted.</p> <p>7.6 The MMO has concerns as to how any amendments or variations to the proposed compensation measures would be processed. Schedule 17 does not make it clear as to whether amendments or variations to the compensation measures would be for the Secretary of State to approve in consultation with the MMO and the relevant Statutory</p>	<p>The Applicant's firm position is that there is no adverse effect on integrity as a result of the Project alone or in-combination with other plans or projects. Without prejudice to this position, in-principle compensation has been presented as requested along with appropriate drafting to secure this in the DCO if necessary. In relation to the timing for submission of the compensatory schemes for approval and the timescales for their delivery, the Applicant considers the drafting of the conditions to be appropriate and refers the MMO to the Applicant's responses to the ExA's fourth round of written questions [ExA.WQ-4.D10.V1], at Q4.5.10.1 to Q4.5.10.3, in this respect.</p> <p>As recognised in Natural England's Deadline 9 submission - Norfolk Boreas position statement regarding mitigation and compensation [REP9-045]: there is agreement between Norfolk Boreas and Natural England that the in-principle compensatory measures proposed by Norfolk Boreas are appropriate. In particular, Natural England state [REP9-045]:</p> <ul style="list-style-type: none"> <li>• HHW SAC Extension (paragraph 1.30) - "Natural England agrees that an extension to the HHW SAC site boundary would be the most environmentally beneficial measure to deliver compensation</li> </ul>



Summary of Submission	Applicant's Comments
<p>Nature Conservation Agency. We request that this matter is considered and clarified in the draft DCO.</p>	<p>for both Annex 1 Sandbanks and Reefs habitat and ensure coherence of the Natura 2000 network";</p> <ul style="list-style-type: none"> <li>• Artificial kittiwake nest sites (paragraph 1.47) - "Though this isn't Natural England's preferred option, we agree that in-principle, the provision of additional nest sites for kittiwakes in the southern North Sea/south-east of England might have the potential to be of benefit to the regional kittiwake population and hence in our view, would ensure coherence of the Natura 2000 network (N2K), particularly if considered as a phased approach that also includes more medium term measures on prey availability"; and</li> <li>• Measures to improve breeding success for lesser black backed gull (paragraph 1.60) – "Natural England agrees with the Applicant that mammalian predator control is the most suitable compensation measure and we believe that this could be achieved through partnership working with local land owners in the wider Alde-Ore. Therefore we feel that further detail on this measure needs to be clarified and conformation that delivery of the measure can be assured".</li> </ul> <p>The same in-principle compensatory measures have been proposed by Norfolk Vanguard and are therefore also considered appropriate by Natural England. The Applicant understands that the MMO have updated their position and recognise that the principle of compensatory measures has now been agreed for all sites, and this will be reflected in the MMO's submissions at Deadline 10.</p> <p>As the compensatory measures are dealt with outside of the DMLs, the Applicant understands that any amendments or variations to them would need to be dealt with through an amendment to the DCO itself (to the extent of course that the compensatory measures are included in any final DCO made). Similarly, to the extent that any amendments are proposed to the generating station, this would require a change to the DCO and therefore is likely to be dealt with through an application to amend the DCO. However, where an amendment relates to any associated</p>

Summary of Submission	Applicant's Comments
	<p>development (e.g. the export cable) it would be open to the Applicant to seek an amendment to the DCO or to submit an application for a new Marine Licence. It will be for the Applicant to determine the consenting route if any amendments are proposed, and it is not appropriate to limit this in the dDCO in any way.</p>
<p>7.7 The MMO also has concerns as to how the compensation is going to be monitored and if the monitoring will be secured. Schedule 17 does not make it clear as to whether any monitoring of the compensation measures will be undertaken and if the monitoring would be for the Secretary of State to review and discharge in consultation with the MMO and the relevant Statutory Nature Conservation Agency or if amendments to the DMLs are needed to capture this. We request that this matter is considered and clarified in the draft DCO.</p>	<p>Each of the draft conditions proposed to secure the in-principle compensatory measures states that the strategy to be submitted must contain proposals for monitoring and reporting on the effectiveness of the compensatory measures. The MMO will be consulted on the scheme and will therefore have an opportunity to comment on the monitoring proposals, including how these should be reviewed and discharged. Notwithstanding this, given that the conditions require monitoring results to be submitted to the Secretary of State, and require proposals to address effectiveness to be implemented as approved by the Secretary of State, it is envisaged by the Applicant that the Secretary of State will have a central role in reviewing and discharging monitoring, albeit in consultation with the MMO and Natural England. In summary, the Applicant does not consider that amendments are required to the DMLs to capture monitoring or reporting on the effectiveness of the compensatory measures, because this is already adequately controlled through the separate DCO schedule dealing with the compensatory measures.</p>
<p>7.8 The MMO notes that the current wording of Schedule 17 does not prevent the whole project being commenced before the compensation plans are approved by the Secretary of State, it only requires that the offshore activities associated with the Project are subject to further approval post-consent. The MMO considers that the DCO should clarify the specific works that cannot commence until compensation is secured. The MMO recognises that it is for the Secretary of State in their Habitats Regulations Assessment to interpret the legislation and ensure that the derogation protocols have been correctly followed.</p>	<p>The Applicant considers that the conditions to secure the compensatory measures are appropriately drafted (to the extent that they are needed at all). It is not necessary to prohibit certain works pending the delivery of the compensation measures. The conditions ensure that compensation is delivered in advance of the harm occurring or, where this is not possible, that the compensation scheme over-compensates to allow for any interim losses. This approach is fully in accordance with the relevant guidance as explained further in the Applicant's responses to the ExA's fourth round of written questions [ExA.WQ-4.D10.V1], at Q4.5.10.1 to Q4.5.10.3.</p>

## 1.7 REP9-037 Natural England’s Cover letter

3. The Applicant has reviewed Natural England’s cover letter and has responded to each of their Deadline 9 submissions in turn below

## 1.8 REP9-038 Natural England’s response to DCO documents

Summary of Submission	Applicant’s Comments
<p><b>Compensatory measures</b></p> <p>Natural England raise the following points in relation to the drafting approach to secure compensatory measures in the dDCO:</p> <ol style="list-style-type: none"> <li>1. Natural England does not think it is appropriate to restrict the compensatory measures to a specific option and recommend that a range of options is permitted;</li> <li>2. Timescales for monitoring and reporting should be secured through the conditions;</li> <li>3. RSPB should be named as a consultee in relation to the FFC SPA compensation; and</li> <li>4. The LPA, National Trust and the RSPB should be named as a consultee in relation to the AOE SPA compensation.</li> </ol>	<p>Dealing with each point in turn:</p> <ol style="list-style-type: none"> <li>1. The Applicant has undertaken a detailed review of potential compensatory measures, in consultation with Natural England, as presented in [REP-025], [REP-026] and [REP-027]. This concludes which compensatory measures are feasible and deliverable within the timescales relevant for the project. It is on this basis that precise compensatory measures have been proposed, with certainty that they can be delivered in appropriate timescales. It is not appropriate to include a range of options given that the Applicant has concluded that the other measures considered are not deliverable or would not achieve the desired outcomes. However, to the extent that monitoring of the measures concluded that they were not effective, the Applicant would not be precluded from taking forward other measures to address this at that stage.</li> <li>2. Monitoring and reporting is secured through each condition in Schedule 19. Timescales and frequencies for monitoring and reporting is a level of detail which is not necessary to include in the conditions, but which will be included in the relevant plan which is submitted to the Secretary of State for approval. Natural England will be consulted on the plan submitted to the Secretary of State and will therefore have an opportunity to comment on the timescales and frequencies proposed for monitoring and reporting.</li> <li>3. Whilst RSPB manage and monitor the FFC SPA it is not considered necessary to name the RSPB as a consultee given that the relevant scheme proposed relates to construction of artificial nest sites outside of the FFC SPA and that as a consequence monitoring the SPA is not required. Furthermore, the</li> </ol>

Summary of Submission	Applicant's Comments
	<p>scale of compensation required (i.e. a new colony numbering 200-300 pairs) to compensate for the potential impact from Norfolk Boreas. compared with the SPA colony of approximately 50,000 pairs means that the likelihood of detecting an effect on the SPA population status as a result of the additional colony is extremely small. In addition, monitoring of the SPA status is a statutory requirement and not one that should be linked to the proposed compensation measures. However, the Secretary of State will not be prevented from consulting additional parties (not referred to in the conditions) if it considers it appropriate to do so at the relevant time.</p> <p>4. It is not appropriate or necessary to include landowners as consultees on planning conditions. In any event, a scheme outside of the Alde Ore Estuary may be appropriate, and the National Trust and the RSPB may not be landowners of that land. Any works undertaken on land not in the control of the Applicant will require landowner consent, and landowners will therefore be fully consulted. As the condition will be discharged by the Secretary of State it is not necessary to refer to the Local Planning Authority or to consult them on the scheme proposed. However, the Secretary of State will not be prevented from consulting additional parties (not referred to in the conditions) if it considers it appropriate to do so at the relevant time.</p>
<p><b>HHW control document</b></p> <p>In relation to the HHW control document (8.20) Natural England state:</p> <ol style="list-style-type: none"> <li>1. That a dML condition is required (or an amendment to the definition of 'cable protection') to restrict the type of cable protection to concrete mattresses or similar protection.</li> <li>2. That it has not been possible to reach agreement on a condition for 95% similar sediment and that any determination on this point by the Secretary of State for Hornsea Project Three and Norfolk Vanguard should be applied to Norfolk Boreas.</li> </ol>	<p>Dealing with each point in turn:</p> <ol style="list-style-type: none"> <li>1. Decommissioning of cable protection is secured within the HHW SAC control document (8.20) and, subject to this, the Applicant should be permitted flexibility as to the type of cable protection it employs. Restricting the type of cable protection will unnecessarily reduce the Applicant's ability to employ alternative types of cable protection which may become available in due course and be compatible with the requirement for decommissioning (but may not be similar to concrete mattresses). Notwithstanding this, the Applicant has been in further discussions with Natural England and, accordingly, the parties have agreed to the following condition:</li> </ol>

Summary of Submission	Applicant's Comments
<p>3. That the requirement for a pre-construction sandwave levelling report should be secured through an update to condition 9(1)(g) of the transmission dMLs (schedules 11 and 12 of the dDCO).</p>	<p><i>"in the Haisborough, Hammond and Winterton Special Area of Conservation, cable protection measures must not take the form of rock or gravel dumping."</i></p> <p>This condition is included at Condition 3(1)(g) (Schedule 11-12) of the dDCO submitted at Deadline 10 [document reference 3.1, version 7] and the Applicant understands that this condition – together with the amendments to the HHW SAC control document (8.20) – addresses Natural England's concerns.</p> <p>2. Agreed.</p> <p>3. The Applicant has agreed to undertake a pre-construction sandwave levelling report for sandwave levelling within the HHW SAC and this commitment is captured within the HHW SAC control document (8.20) at paragraph 57 of the CSIMP [REP6-017] and paragraph 103 of the SIP [REP6-012]. It is not therefore necessary or appropriate to include this within condition 9(1)(g) which, in any event, would relate to areas outside of the HHW SAC in the event that the CSIMP condition was adopted.</p>
<p><b>Note on Requirements and Conditions</b></p> <p>Natural England request that reference is made to the requirement to submit monitoring methodologies, including the new proposed plan for ornithological monitoring.</p>	<p>The Note on Requirements and Conditions has been updated and will be submitted at Deadline 11 to include reference to the ornithological monitoring plan.</p>
<p><b>Schedule of changes to the dDCO</b></p> <p>Natural England state that the minimum turbine size of 11.55MW should be secured.</p>	<p>The Applicant provided a full and detailed response to WQ3.2.1.3 of the Examining Authority's third round of written questions [REP7-017] to explain why it is not necessary or appropriate to include reference to the minimum turbine size. Natural England's comments on the Applicant's response to WQ3.2.1.3 refer to [REP9-049] which welcomes the Applicant's response and states <i>"We are mostly content that all the relevant parameters for the revised WCS are secured in the updated dDCO conditions and that so long as all of these parameters are observed; collision risk will not be anticipated to exceed the worst case modelled in the collision risk assessment. However, please see our comments in response to DCO documents at D9 regarding the inclusion of minimum turbine size"</i>.</p>

Summary of Submission	Applicant's Comments
	<p>However [REP9-038] gives no explanation or justification as to why it is necessary or appropriate to secure a minimum turbine size in light of the Applicant's response to WQ3.2.1.3. In the circumstances, the Applicant considers that Natural England's position has not been evidenced.</p>
<p><b>Outline Code of Construction Practice</b></p> <p>Natural England welcome:</p> <ol style="list-style-type: none"> <li>1. The clarification for bat mitigation (paragraph 71);</li> <li>2. The clarification of ecological considerations in relation to surface and ground water resources;</li> <li>3. That ecological enhancement will be considered in the River Wensum floodplain; and</li> <li>4. The amendment to clarify the response to emergency operations in proximity to SSSIs (paragraph 182).</li> </ol>	<p>Noted.</p>
<p><b>Outline Landscape and Ecological Management Strategy</b></p> <p>Natural England welcome the update that works will be at least 15m away from ancient woodlands.</p>	<p>Noted.</p>
<p><b>Outline Traffic Management Plan</b></p> <p>Natural England welcome the inclusion of Figure 26.5.</p>	<p>Noted.</p>
<p><b>Offshore In Principle Monitoring Plan</b></p> <p>Natural England notes that potential monitoring for compensatory measures is not referenced in the updated plan.</p>	<p>The Applicant's firm position is that there is no adverse effect on integrity (AEoI) as a result of the project alone and in-combination. In-principle compensatory measures have only been proposed on that basis and without out prejudice to that position. Accordingly, it is not appropriate to include monitoring of compensatory measures in the Offshore In Principle Monitoring Plan (IPMP). If the Secretary of State considers that compensatory measures must be delivered following a finding of AEoI, proposals for monitoring (and reporting on the effectiveness) of the compensatory measures will be included within the specific plan submitted in relation to those measures for the Secretary of State's approval. This is already secured within the</p>

Summary of Submission	Applicant's Comments
	drafting proposed for Schedule 19 and it is not therefore necessary to include this within the IPMP in any event.

## 1.9 REP9-039 Natural England's comments on Outline Norfolk Boreas Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan and Cable Specification, Installation and Monitoring Plan

	Summary of Submission	Applicant's Comments
Row No.	General Comments relevant to SIP and CSIMP	
1	In relation to securing mitigation measures we note that the CSIMP would also have this requirement therefore we propose that the CSIMP should in fact be the 'Cable Specification, Installation, Mitigation and Monitoring Plan.	The Applicant does not fundamentally object to this name change, but it does consider that a change in name at this late stage of the examination would be unhelpful and lead to confusion given that so many of the Examination submissions thus far refer to the document under its current title. This could, however, be addressed as part of the final submission of the document post consent.
2	How will the monitoring for Norfolk Vanguard and Boreas take into account potential skewing of data from works happening for either project?	<p>The separation distance between the Norfolk Boreas and Norfolk Vanguard export cables would be approximately 250m therefore the area affected by the Norfolk Vanguard cables would be geographically removed from the focus of the Norfolk Boreas monitoring surveys and vice versa.</p> <p>Norfolk Boreas and Norfolk Vanguard are in a unique position whereby both projects are owned by the same parent company which will allow strategic monitoring to be undertaken across both projects if that were to be mutually beneficial whilst remaining compliant in discharging the conditions of both projects.</p>
3	Also all of the points raised in relation to the In principle Monitoring Plan for Boreas need to be acknowledged in the Control Documents	The Applicant is unsure of exactly what Natural England is referring to here. Further discussion on monitoring is included within the Natural England Statement of Common Ground submitted at Deadline 10 [ExA.SoCG-17.D10.V4] in which Natural England request further detail on exactly when each survey would be undertaken. The Applicant's response is that this level of detail would be agreed within the final plans once construction



Summary of Submission		Applicant's Comments
		programmes had been confirmed; it would be overly restrictive to commit to certain timings and that level of detail during the Examination.
4	In a previous version paragraph 36 had detailed information on what would be provided pre construction to inform cable installation – we would welcome its retention.	The Applicant is unsure of what detailed information Natural England are referring to here as the Applicant has only ever submitted one version of the CSIMP to the Norfolk Boreas Examination [REP6-017]. The equivalent level of detail, as that provided in paragraph 36 of the CSIMP, is also provided in paragraph 81 of the SIP [REP6-011] which has remained unchanged since the first submission of the SIP [APP-711] where this information was included in paragraph 65.
5	<p>SIP 41 CSIMP 65 Cable protection.</p> <p>Please note that within Annex 4 which discusses the possible decommissioning of cable protection Natural England highlights that whilst the impacts from cable protection are no longer considered to be permanent; the placement of cable protection is considered to be having a lasting change on the habitat over a period of 30 years (life time of project) and beyond, as recovery will not be immediate. There is no evidence presented that demonstrates what the impacts are likely to be on Annex I habitats and site conservation objectives from such a temporally long time and that habitat recovery is achievable to its pre-impacted state. Therefore, it is our view that a 30 year change in habitat cannot be considered to be a small scale loss/change. In addition there is no evidence presented on the potential for any wider surrounding area impacts from the presence of the cable protection and its removal. Therefore, due to the uncertainties any assessment needs to include precaution. For decommissioning to be considered as mitigation then cable protection would need to be restricted to concrete mattresses (or similar type product) in the DCO/DML through an update to the interpretations. The same is true for CSIMP paragraph 65.</p>	<p>In summary the Applicant:</p> <ul style="list-style-type: none"> <li>• Does not consider it necessary to include a condition in the DCO which limits the Applicant to concrete mattress (or a similar product). This because the Applicant has already committed to full decommissioning cable protection within the SAC.</li> <li>• Has, in discussions with Natural England on the 5<sup>th</sup> of May 2020 identified that Natural England's primary concern was that rock dumping was still an option within the HHW SAC.</li> <li>• The Applicant has since therefore included a condition which removes rock and gravel dumping as a potential cable protection option (see text below).</li> <li>• Has confirmed with Natural England that they now accept that impacts can be considered long term temporary and that the risk of AEol is now "significantly reduced" see the SoCG with Natural England [ExA.AS-1.D10.V3].</li> <li>• Understands that whilst there is limited evidence to demonstrate recovery of benthic habitats as result of cable protection removal (as no project has undertaken this yet), the Applicant sets out below evidence from other industries where recovery has occurred.</li> </ul> <p>Further context to these points is provided below.</p> <p>The Applicant does not agree that a condition restricting the Applicant to concrete mattresses (or similar type product) is required in the DCO in order to allow decommissioning to be considered as mitigation. Decommissioning</p>

Summary of Submission	Applicant's Comments
	<p>of cable protection has been secured within the HHW SAC control document (8.20) and therefore the Applicant will be required to ensure and provide evidence that any cable protection installed within the HHW SAC will be of a type which can be fully recovered. This has been clarified in the updated HHW SAC control documents (document 8.20) submitted at Deadline 10 which now contain the following statement, agreed by Natural England:</p> <p><i>"It will therefore be the Applicant's responsibility to demonstrate in the final SIP that the chosen form of cable protection can successfully be decommissioned."</i></p> <p>Any commitment to a certain type of cable protection would not provide any further certainty that decommission can be achieved. The Applicant should be permitted flexibility as to the type of cable protection it employs. Restricting the type of cable protection will unnecessarily reduce the Applicant's ability to employ alternative types of cable protection which may become available in due course. The Applicant discussed this position with Natural England on 5 May 2020 and the Applicant has now included the following in Condition 3(1)(g) of the Transmission DMLs:</p> <p><i>(7) In the Haisborough, Hammond and Winterton Special Area of Conservation, cable protection measures must not take the form of rock or gravel dumping.</i></p> <p>This condition has been added to the DCO to address Natural England's concerns that rock dumping could be deployed during construction which could both affect the function of natural processes (see row 4 in section 1.13) and would also not be a feasible decommissioning option.</p> <p>Agreement that the inclusion of the above condition has addressed Natural England's concerns on this matter is provided within the Natural England SoCG [ExA.AS-1.D10.V3].</p>

Summary of Submission		Applicant's Comments
		<p>The Applicant recognises that there was no evidence presented for recovery of Annex I habits to its pre-impacted state following removal of cable protection and that is due to the fact that no offshore wind farm project has yet been required to decommission its cable protection. There is, however, good evidence available from several studies in the UK, including the North Sea and English Channel, measuring recovery of biological communities following aggregate dredging. The physical disturbance and removal of seabed habitat pressures associated with aggregate dredging are likely to be similar to the pressures resulting from presence of and subsequent decommissioning of cable protection.</p> <p>Recovery of seabed habitats following aggregate dredging has been summarised in Newell et al. (2002) Foden et al. (2009) and see also Hill et al., 2011. Sandy deposits in strong tidal streams had a physical recovery time of 1-3 years and a similar biological recovery time. An overview of the literature confirmed that recovery of both substrate composition and associated biological resources is relatively fast in high energy environments characterised by sands that are colonised by mobile opportunistic species with a high rate of growth and reproduction (Newell &amp; Woodcock 2013), such as those present in HHW SAC. Furthermore, initial recolonization of sandy sediments from several sites in the North Sea and English Channel, similar to those of HHW SAC sandbanks, has been shown to be rapid, with recovery of species richness within 12-16 months from significant disturbance from aggregate dredging (Newell et al 1998).</p>
6	<p>Sediment Disposal. We note that in the disposal principles the need to dispose of sediment in areas of similar grain size i.e. the SoS 95% similar DCO condition has not been addressed. Natural England has engaged in discussion with the Applicant on the condition for 95% similar sediment and will be informed by the outcome of the deliberation of SoS in relation to Hornsea Project Three and Vanguard. We would suggest that the decision of the SoS be applied to the Boreas project. In addition the above comment on decommissioning is also relevant to the text included within the table.</p>	<p>The Applicant has provided clear justification on why such a condition is not appropriate in its comments on Relevant Representations [AS-024] and during ISH4 [REP4-014]. Further reasoning has been provided on the Applicant's position when commenting on the MMO's response to question Q3.2.0.2 [REP8-015].</p> <p>Further detail on both the Applicant's and Natural England's position is included with the Statement of Common Ground which has been submitted at Deadline 10 [ExA.SoCG-17.D10.V4].</p>

Summary of Submission		Applicant's Comments
		The Applicant discussed this further with the MMO and Natural England on 28 <sup>th</sup> April 2020 and all parties agree that the precise drafting of any condition, and indeed whether a condition should be included at all, will depend on the outcome of the SoS's determination of Hornsea Project Three and Norfolk Vanguard. Therefore, it is not possible to advance this issue further during the Norfolk Boreas Examination.
7	<p>Sandwave Levelling</p> <p>Natural England welcome that the final HHW SAC CSIMP will contain a preconstruction sandwave levelling report as requested by Natural England within their Relevant Representation (RR-099). It is however unclear if the preconstruction Sandwave levelling report is secured in the DCO. This could be included as a requirement under the transmission DML condition 9(1)(g) however it currently is not secured.</p>	As stated in section 1.8 above, the Applicant has agreed to undertake a pre-construction sandwave levelling report for sandwave levelling within the HHW SAC and this commitment is captured within the HHW SAC control document (8.20) at paragraph 57 of the CSIMP [REP6-017] and 103 of the SIP [REP6-012]. It is not therefore necessary or appropriate to include this within condition 9(1)(g) which, in any event, would relate to areas outside of the HHW SAC in the event that the CSIMP condition was adopted.
8	<p>Mitigation Commitments</p> <p>Natural England welcomes the commitment to not use jack up vessels in the HHW SAC to further minimise impacts to benthic habitats.</p>	The Applicant notes this and has no further comment to make.
9	<p>Annex I Sandbank</p> <p>Natural England notes that Norfolk Boreas highlight only the delineated Sandbank feature and buffer zone as areas of Annex I Sandbanks that are to be managed for conservation as Sandbanks. However, the sediment between Sandbanks is also important for the functioning of the Sandbanks, as well as for Annex I Reef formation, and therefore impacts occurring between features may still be detrimental to the Annex I feature(s). A 2016 SNCB survey identified that the species composition in these areas was similar to that of the species composition within the Annex I features. Put simplistically, if these areas are sandy and dynamic they are considered important to / part of the Sandbank features and if stable and mixed sediment have the potential to support Reef habitat. The only areas within the SAC thought not to be providing this important 'functionality' role is where exposed oil and gas pipelines transect the site. Therefore, it cannot be determined that the impacts are small scale and inconsequential.</p>	<p>The Applicant's position regarding the areas in between the defined designated features is presented in paragraph 37 of the Applicant's position paper on the HHW SAC [REP5-057]. In summary the Applicant considers this position goes beyond protecting the conservation status of the features for which the site is designated. However, the Applicant has followed Natural England's advice note regarding consideration of small scale habitat loss within SACs in relation to cable protection [REP1-057] which states that Natural England would consider there to be no likelihood of an AEoI where any one (or more) of the following can be demonstrated:</p> <ul style="list-style-type: none"> <li>• That the loss is not on the priority habitat/feature/sub feature/supporting habitat, and/or</li> <li>• That the loss is temporary and reversible, and/or</li> <li>• That the scale of loss is so small as to be de minimis and/or</li> <li>• That the scale of loss is inconsequential including other impacts on the site/feature/sub feature.</li> </ul> <p>Through the various mitigation commitments made by the Applicant (including decommissioning cable protection to ensure the loss would be</p>

Summary of Submission		Applicant's Comments
		<p>temporary, reducing the quantity of cable protection and avoiding Annex I reef and priority areas to be managed as reef) the Applicant considers that all of the above are demonstrably met in the case of Norfolk Boreas.</p> <p>Therefore regardless of Natural England's recent position that the areas in between Sandbanks should be treated as Annex I habitat (which was not the position when the HHW SAC was designated and thus why the Annex I Sandbanks were delineated), it can be determined that impacts are small scale, inconsequential and therefore would result in no AEoI.</p>
10	<p><b>Micrositing</b></p> <p>Natural England notes that in both the SIP and the CSIMP the consideration of micrositing does not take into account potential archaeological finds. Please see Natural England's advice on the Applicant's Clarification Note on optimising cable routing through the HHW SAC [REP5 – 081] for details on this matter.</p>	<p>The Applicant does not consider that potential archaeological features should be included within the SIP or the CSIMP documents. These will be considered in the final offshore WSI . However, the Applicant has considered the potential to avoid both known and potential archaeological features jointly with Annex I habitats, as well as other potential constraints, and will continue to do so in further detail during the final route design process. The clarification note [REP4-022] demonstrates that appropriate route design would enable micrositing to avoid all impacts.</p>
11	<p><b>Interim cable burial study</b></p> <p>Whilst Natural England welcomes the further consideration of the data sets; we note that there is currently only limited scientific evidence on which to base the conclusions of this report; in particular the recovery of reef.</p>	<p>The Applicant has used the best available evidence, which includes comprehensive site specific geophysical and geotechnical survey data collected on behalf of the Applicant. This has been supplemented with other available and relevant data sets. The report also contains a level of precaution within its conclusions which have been used to identify a worst case scenario. Therefore, the Applicant has a high degree of confidence in the conclusions of the report and is content that there is an appropriate level of contingency used when interpreting the findings to allow for any uncertainty. Therefore, the Applicant disagrees that the report is only based on limited scientific evidence. The report does not conclude on whether reef will recover. However, please see the Applicant's response in row 5 of section 1.10 outlining the Applicant's position that the mapping undertaken by the Applicant has good scientific grounding and that the situation in terms of the extent and location of Annex I reef is unlikely to change prior to construction.</p>

Summary of Submission		Applicant's Comments
12	Locations of cable protection Natural England notes that the area(s) most likely to require cable protection is within mixed sediment areas between Sandbanks which are most likely to support Annex I reef.	As demonstrated in Appendix 3 of the CSIMP or SIP the locations where cable protection is most likely to be placed all fall outside the areas which Natural England has identified as "priority sites" where they have the highest confidence that Annex I <i>S.spinulosa</i> reef would occur or recover (referred to in the report as priority areas). See Figure 1 of Appendix 3 of the SIP of CSIMP [REP6-011 and REP6-017 respectively].

### 1.10 REP9-040 Natural England's comments on Additional information for the HHW SAC position paper

Row No.	Summary of Submission	Applicant's Comments
1	Section 2.1 page 39 and 72 Please note that the Haisborough Hammond Winterton Special Area of Conservation (HHW SAC) restore objective for Annex I reef is not just in relation to the fisheries impacts. Therefore the placement of cable protection outside of the Applicant's identified 'priority' areas for fisheries management may still have an effect on the restore objective of the HHW SAC. For example if Annex I reef is impacted through cable installation outside of priority areas then there will be a further area that needs to recover in addition to those being managed to restore the impacts from fisheries.	<p>The 'priority' areas Natural England refers to are the areas which Natural England (and not the Applicant), have identified in Appendix 2.2 and Appendix 2.3 of their Relevant Representation [RR-099] as "priority" sites. Figure 1 in Appendix 2.3 shows "Area to be managed as <i>S.spinulosa</i> reef" which have been identified by Natural England and JNCC.</p> <p>Paragraph 1.4.7 of Appendix 2.2 of Natural England's relevant representation states that:</p> <p><i>"Natural England advises that as a minimum the area of high confidence reef (as indicated by the larger red circle in Figure 1 above) should be avoided in its entirety."</i></p> <p>Unfortunately, the Figure which Natural England refers to is missing from their relevant representation, however the Applicant has located this figure within Natural England's Deadline 6 submissions to the Norfolk Vanguard Examination [REP6-032]. A copy of this Figure is presented in Appendix 1 of this document.</p> <p>Paragraph 1.4.8 of Natural England's Relevant Representation [RR-099] states:</p> <p><i>"This is because this area has been selected as one of two top priority sites for management of reef due to the good evidence base and likelihood for reef to recover and therefore we advise no activities should be allowed to take place within this area which would hinder the outcome of the management measures."</i></p>

Row No.	Summary of Submission	Applicant's Comments
		<p>In direct response to paragraph 1.4.7 above, the Applicant undertook detailed analysis (see the interim cable burial report and Appendix 3 of the SIP and CSIMP) to identify if it would be possible for the Applicant to commit to avoiding placing cable protection (the impact that Natural England is most concerned about due to its permanent nature - see row 10 in section 1.15) within the priority areas or areas "of high confidence reef (as indicated by the larger red circle in Figure 1" (which is replicated in Appendix 1). The results of this analysis have enabled the Applicant to make this commitment, which has been welcomed by Natural England (see section 1.15).</p> <p>The second top priority site mentioned by Natural England in paragraph 1.4.8 and shown in Appendix 1 by the smaller red circle (see above) falls within six nautical miles of the coast and is therefore within the jurisdiction of the Eastern IFCA. The Eastern IFCA have expressed a strong preference for the Applicant to commit to avoiding this area as detailed within the SoCG between the Applicant and the Eastern IFCA [REP9-019]. Following the analysis provided in Appendix 3 of the SIP and CSIMP the Applicant has made the commitment to avoid placing cable protection within the smaller top priority site located within their jurisdiction. The Eastern IFCA has welcomed this commitment [REP9-019].</p> <p>The Applicant has committed to avoiding all Annex I reef where this is possible, and this commitment extends to all areas of the project whether inside a fisheries management area or not. The Applicant has a high level of confidence that this will be possible [see REP5-057 and REP6-016] and therefore any areas impacted would not be "additional" as Natural England state.</p> <p>In summary, at the request of Natural England the Applicant has invested in significant research and analysis to allow it to make a commitment which has been requested by Natural England. In addition, the Applicant has used the data advocated and provided by Natural England, showing areas in which Natural England have the highest confidence that <i>S.spinulosa</i> reef will recover (which the Applicant considers to be over precautionary [See REP5-057 for further detail]) to make these commitments. Finally, these commitments have been made notwithstanding that the proposed fisheries restrictions are targeted at reducing fishing pressure and not cable installation.</p>



Row No.	Summary of Submission	Applicant's Comments
2	<p>Section 2.1</p> <p>Decommissioning of cable protection</p> <p>Please see our submission in response to Cable Protection Decommissioning as submitted at D9 for further details.</p>	<p>The Applicant's response to these comments is provided in section 1.13, 1.8 and 1.9 of this document.</p>
3	<p>Section 2.2</p> <p>Removal of disused cables</p> <p>Natural England welcomes the removal of disused cable to further reduce the need for cable protection at crossing locations within the HHW SAC.</p>	<p>Agreement with BT that out of service cables which the Norfolk Boreas export cable(s) would cross within the HHW SAC has now been reached and Out of Service Recovery Agreements have now been signed by both BT Subsea and Norfolk Boreas Limited. Now that this commitment can be put forward as mitigation the relevant documents have been updated and submitted for Deadline 10.</p>
4	<p>Section 3</p> <p>HHW SAC Control Document 8.20</p> <p>Please see Natural England's comments on the HHW Site Integrity Plan (SIP) and Cable Specification, Installation, and Monitoring Plan (CSIMP) in a separate document and Position Statement as submitted at D9.</p>	<p>The Applicant's response to these comments is provided in section 1.9 of this document.</p>
5	<p>Section 3.2.5.2</p> <p>Natural England has concerns about (a) the practical suitability of the proposed Grampian condition and (b) the legality of the use of this condition. Please see Natural England's Position Statement. These concerns remain and are repeated. It is for the Secretary of State to determine, on the basis of an Appropriate Assessment, whether the information provided by the Applicant actually supports the conclusion of no AEoI. In making this judgement the decision maker will have to bear in mind that the evidence to hand is essentially snap-shot and that things are likely to have changed during a realistic timescale.</p> <p>The Applicant points out that the purpose of the Grampian condition is to "verify previous assessments". Natural England responds to this by noting that there is a possibility that the condition's mechanism</p>	<p>The Applicant's response to Natural England's position paper on the legality of the SIP is provided in Section 6 of the Applicant's position paper on the HHW SAC [REP5-057]. Within the other sections of that document the Applicant clearly demonstrates why a conclusion of no AEoI can be made at the consenting stage. Further evidence is provided in the Additional information for the HHW SAC position paper and its Appendices [REP6-016 to REP6-020].</p> <p>The Applicant disputes the notion that this has been based on a "snap-shot" in time. The data used in the Applicant's Sabellaria Review [APP-207] was collected over a six year period (from the REC, (MALSF, 2011) to the CEFAS cruise (McIlwaine et al, 2017)). The Applicant acknowledges that not all of the data sets used were specifically targeted at surveying the Norfolk Boreas offshore cable corridor and therefore not all provide full coverage of the area in question, however the detailed surveys completed by the Applicant in 2016 do so. The Applicant maintains that the amount of and resolution of data used in the study is temporally</p>



Row No.	Summary of Submission	Applicant's Comments
	<p>will not verify previous assessments, because previous assessments may be superseded by events. There is not “every prospect that the Grampian condition can be discharged in the timescales ...” – because there is some prospect that it cannot.</p> <p>It is not appropriate to equate the use of the SIP process in this case to its use in the SNS SAC, in relation to the disturbance of marine mammals. In that case NE is sure that if works etc are suitably timetabled and carried out in the right way there will be no AEol. That certainty is based on confidence in existing technologies and mechanisms for ensuring sensitive timetabling. In this case the contingencies are greatly less knowable at this range.</p>	<p>and geographically extensive and therefore should not be dismissed as a “snapshot”. Furthermore, the amount of data used in this study [APP-207] is far greater than what would ordinarily be expected to support any EIA or Appropriate Assessment.</p> <p>As explained within section 2.2.1 of the Applicant's position paper [REP5-057] the level of fishing pressure across much of the HHW SAC and especially the areas identified by Natural England and JNCC to be managed as <i>S.spinulosa</i> reef (See Row 1 of this Table) is low (see Appendix 2 of this document, with further information provided in REP5-057]) and therefore it is unlikely that the location and extent of <i>S.spinulosa</i> reef will have changed significantly in the expected four to five years before Norfolk Boreas construction commences. Therefore, the Applicant's conclusions that there is no adverse effect on integrity at the consenting stage are very likely to be fully “validated” during the discharge of conditions prior to construction. At which point, it is likely that the worst case scenarios used in any assessment will be greatly reduced as further detailed design work is completed. Which in turn, along with further surveys, will allow a higher degree of certainty to be applied, which will allow removal of the high levels of precaution which have been applied at this stage to account for uncertainty.</p>
6	<p>Para 57</p> <p>The proposal to use a Cable Specification, Installation and Monitoring Plan (CSIMP), which has to be submitted to and approved by the MMO, does not cure the problems of uncertainty. For legal purposes a future CSIMP will represent a plan or project that will have to be subjected to Appropriate Assessment during the process of approval by the MMO. Depending on circumstances existing at the time of submission of a CSIMP to the MMO the Appropriate Assessment is capable of concluding that AEol will be caused, exactly as with the SIP process.</p> <p>To amplify this point: the proposed condition describes a process by which cable laying cannot commence until a plan for it has been submitted to and approved in writing by the MMO. This is a situation</p>	<p>As stated in the Applicant's Comments on Responses to the Third Round of Written Questions [REP8-015],the Applicant is emphatically not proposing to defer an Appropriate Assessment at the consenting stage. A full Information to support Habitats Regulations Assessment (HRA) Report has been provided with the application [APP-201] which concludes, with no reliance on a Grampian condition, that there is no adverse effect on integrity (AEol). Whilst it is correct that the final number and precise route of the cable has yet to be determined, the assessment has been undertaken on the basis of a worst case scenario (see row 5 above).</p> <p>In the event that it was considered necessary to undertake a further Appropriate Assessment at the point of discharge of the condition (if, for example, the position had significantly changed from that previously assessed – which the Applicant considers is unlikely to be the case for reasons stated in row 5 above), the MMO as the regulatory body for marine activities would be the competent authority and therefore the appropriate body to conduct such an assessment (as has been</p>

Row No.	Summary of Submission	Applicant's Comments
	<p>contemplated for by reg. 28 (1) of the Conservation of Offshore Habitats and Species Regulations 2017, which provides that "Before deciding to undertake, or given any consent, permission or other authorisation for, a relevant plan or project, a competent authority must make an appropriate assessment of the implications of the plan or project for the [SAC] in view of that [SAC's] conservation objectives". By reason of reg. 5 of the 2017 Regulations the MMO is plainly a (or the) competent authority in this situation and the subject matter of a CSIMP is plainly a "relevant plan or project" for the purposes of reg. 28 (2) as all three of reg. 28 (2) (a), (b) and (c) are fulfilled. It therefore follows that on receipt of a CSIMP, and before that it can approve it, the MMO will have to carry out its own appropriate assessment of the Applicant's plan for specifying, installing and monitoring cables within the HHW SAC. It cannot be said that these things have received appropriate assessment at the time of the making of the DCO, because at that time the necessary details had not been specified.</p> <p>It may be that at the point of submission of a CSIMP it will indeed be possible to micro-site the cable in a manner that is neutral as to protected features, but the significant effect on the site cannot be ruled out</p>	<p>acknowledged by the MMO in the Statement of Common Ground with them [REP9-023]). This is no different to the MMO's role in undertaking any other Appropriate Assessment which is required before arriving at any determination (i.e. the grant of a Marine Licence) which may have an adverse effect on the integrity of a European site.</p> <p>Further justification of the Applicant's position is provided in Section 6 of the Applicant's Haisborough Hammond and Winterton Special Area of Conservation Position Paper [REP5-057] and the Applicant's Comments on Responses to the Third Round of Written Questions [REP8-015].</p>
7	<p>Para 24 HHW SAC CSIMP</p> <p>Natural England does not agree with the Applicant's conclusions that the mitigation secured in the CSIMP will rule out adverse effect on integrity as set out by the attached documents.</p>	<p>The Applicant maintains that AEoI can be ruled out and justification for this is provided within the Information to support HRA Report [APP-201], the Haisborough Hammond and Winterton position paper [REP5-057], the Additional information for the HHW SAC position paper [REP6-016] and its appendices, and the HHW SAC control documents (8.20).</p>
8	<p>Para 26</p> <p>The only time that the CSIMP condition is considered to be appropriate is if no AEoI is determined by the competent Authority and/or AEoI is removed by the securing of compensation measures.</p>	<p>The Applicant considers that a worst case scenario has been presented which concludes on the basis of the best available evidence that there is no AEoI at the consenting stage and that there is a high degree of confidence that this conclusion will not change prior to the point of construction. As outlined in all the supporting documents referred to in row 7 above, the assessment includes a high level of</p>

Row No.	Summary of Submission	Applicant's Comments
	Please see D9 submissions and Position Statement in relation to the SIP and CSIMP [NE.NB.D9.03.SIP].	precaution within the worst case scenario assessed and this will only have reduced by the time the documents require discharge. See section 1.10 for the Applicant's response to Natural England's comments on the SIP and CSIMP.
9	<p>Para.35</p> <p>HHW SAC Habitat Loss</p> <p>Whilst we can agree that decommissioning cable protection would change the impact to temporary there is still a further consideration of significant temporal impacts from a lasting impact for &gt;30 years. There is no evidence presented of what the impacts are likely to be on Annex I habitats and site conservation objectives from such a temporally long time and that habitat recovery is achievable to its pre-impacted state. It therefore cannot be considered with certainty to be a temporary impact. In addition, it is our view that 30 years of change in habitat cannot be considered to be a small scale loss/change.</p>	<p>The Applicant's commitment to decommission cable protection was made following discussions with Natural England that such a commitment would be welcomed and would reduce any potential effects on Annex I habitats. The Applicant maintains that even without the commitment to decommissioning cable protection it would be possible to rule out AEoI, and the commitment was made to give Natural England further assurance that any potential effects on the SAC would be mitigated as far as possible.</p> <p>As demonstrated in the Assessment of Additional Mitigation in the Haisborough, Hammond and Winterton Special Area of Conservation (Version 2) [REP6-019] and further discussed in row 9 of section 1.9, the Applicant considers that it has met all Natural England's tests for an impact to be considered small scale as outlined in their guidance [REP1-057].</p>

### 1.11 REP9-041 Natural England's comments on Norfolk Boreas Position Statement on Derogation

Summary of Submission	Applicant's Comments
Summary of Natural England Position on HHW SAC	
The mitigation provided by Norfolk Boreas must either avoid or reduce as far as possible the impacts associated with the development. That mitigation should mean the development will not, alone, have an adverse effect on integrity (AEoI) of the SPAs. Any residual effects of the development which alone are not adverse must be considered in combination with the residual impacts of other plans and projects.	The Applicant notes that Natural England agrees with the Applicant that Norfolk Boreas will not result in any AEoI due to the project alone [REP7-047]. Detailed consideration of options to compensate for the project's contribution to the in-combination effects was provided in [REP7-024].

Summary of Submission	Applicant's Comments
<p>Natural England agree that AEoI can be ruled out for both kittiwake at the Flamborough and Filey Coast (FFC) SPA and lesser black-backed gull (LBBG) at the Alde-Ore Estuary SPA from Norfolk Boreas <b>alone</b> (see our Deadline 7 response to REP5-059) and therefore, there is no need for compensation due to Norfolk Boreas <b>alone</b>. However, we consider that it is not possible to rule out AEoI for LBBG and that there is an AEoI for Kittiwake due to in-combination collision mortality and that includes a contribution from Norfolk Boreas (see our Deadline 7 response to Applicant's REP6-024 on updated cumulative/in-combination collision risk). We note Natural England's advice during the Thanet Extension Examination was that whilst this project made a small contribution to the in-combination collision mortality, it could not be concluded that there would be no AEoI of the site by the project, when considered in-combination.</p>	<p>The Applicant's detailed consideration of options to compensate for the project's contribution to the in-combination effects was provided in [REP7-024].</p> <p>The Applicant notes that Natural England has apparently changed its position with respect to the conclusion on in-combination AEoI, from 'it is not possible to rule out an in-combination AEoI' [REP7-047] to 'consider there to be an AEoI' in their deadline 9 submissions.</p> <p>The Applicant strongly disagrees with this apparent change of position which has been made at a very late stage in the Norfolk Boreas examination and is contrary to Natural England's consistent advice of "it is not possible to rule out" which was their stated position since 2016 with respect to the in-combination kittiwake assessments for East Anglia THREE, Hornsea Project Two, Thanet Extension, Norfolk Vanguard and Norfolk Boreas (the latter until deadline 7; REP7-047). It is apparent that this revised position has not occurred due to any new additions to wind farm mortality and the Applicant has not been provided with any new information from Natural England. Therefore the Applicant is not aware of any new evidence which could justify the basis for this apparent change in position. Furthermore, the most recent wind farms in the assessment (Norfolk Boreas, Norfolk Vanguard and Hornsea Project Three) have all recently committed to mitigations which substantially reduce collision risks (e.g. by up to 70% in the case of Norfolk Boreas) and Natural England has recently acknowledged the availability of headroom, which adds further precaution to their assessment. Given this, the Applicant can see no rational basis for Natural England's sudden apparent change in position.</p>
<p>Natural England agrees with the Applicant that following the commitment to mitigation measures from the Applicant, AEoI can be ruled out for red-throated diver (RTD) and common scoter at the Greater Wash SPA due to Norfolk Boreas alone and in-combination from construction activities and operations and maintenance vessels (see REP4-040). We also agree with the Applicant that AEoI can be ruled out for collision risk to little gull at the Greater Wash SPA from the project alone and in-combination (see REP4-040 and our Deadline 7 response to Applicant's REP6-024 on updated cumulative/in-combination collision risk).</p>	<p>The Applicant welcomes Natural England's agreement that there is no adverse effect on integrity due to effects from Norfolk Boreas alone or in-combination with other plans or projects for the Greater Wash Special Protection Area (SPA).</p>

Summary of Submission	Applicant's Comments
<p>Therefore, there is no need for compensation due to Norfolk Boreas alone or in-combination for the Greater Wash SPA.</p>	
Precaution in assessments	
<p>The Applicant asserts that ornithology impact assessment for offshore wind farms has become highly over precautionary through the accumulation of numerous individual precautionary elements added throughout the different stages of assessment. As noted in our Deadline 4 responses [REP4-039, REP4-040 and ISH response [REP4-043] and in our response to Examining Authority Question 2.8.4.4 [REP5-077], we do not agree with the Applicant's assertion regarding over precaution in assessments.</p>	<p>The Applicant notes Natural England's responses and position with respect to individual elements of precaution in assessments. However, the Applicant maintains that Natural England's approach to assessment combines these individual elements in a manner which results in over-precaution (for the avoidance of doubt, in making this point the Applicant is not specifically referring to cumulative or in-combination assessments).</p> <p>The Applicant considers that Natural England has still not provided a full justification for the combined precaution that is requested for assessment. For example, for the SPA features where Natural England considers that AEoI exists (kittiwake from Flamborough and Filey Coast SPA) or cannot be ruled out (lesser black-backed gull from Alde-Ore Estuary SPA), the following are combined:</p> <ul style="list-style-type: none"> <li>• The use of the extended breeding season even though the wind farm is located at the limit of the species' foraging ranges;</li> <li>• Upper levels of apportionment to the SPAs, for example up to 100% for kittiwake;</li> </ul> <p>(the combined effect of these two levels of precaution means that impacts are almost certainly disproportionately assigned to the SPAs); and</p> <ul style="list-style-type: none"> <li>• Density independent Population Viability Analysis (PVA) results, despite the wide acceptance that these models are more precautionary (the Applicant notes that density independent PVA are not always more precautionary, but for these populations such arguments are not considered applicable).</li> </ul> <p>Natural England has provided the basis for why the individual elements of precaution are justified and the Applicant has acknowledged that there may be justification for some of these arguments, on an individual basis. However, Natural England has not (in the opinion of the Applicant) properly addressed the question of the overall inflation of impact magnitude, on which assessment conclusions are based on, and which results from combining the individual precautionary aspects in the assessment.</p>

With regard to consented versus as built turbine numbers and headroom in in-combination collision assessments, we note our Deadline 6 response [REP6-049] and Deadline 7 response to our response to Applicant's D6 headroom position paper. In summary, Natural England:

a) Acknowledges the work that the Norfolk Boreas Applicant and their consultants have done to consider potential headroom in the in-combination/cumulative collision risk figures by assessing the 'as built' rather than the worst case scenario (WCS);

b) Recognises 'headroom' as an important issue; it is a highly complex one though, and it is important to note that there is not yet an agreed way forward at present. The Applicant's approach has also not been subjected to judicial scrutiny.

c) Does not disagree that there is likely to be some headroom; however, the exact extent of any potential headroom is not agreed.

There are a number of uncertainties/issues with the approach proposed by the Applicant in REP4-014 and in REP6-021, namely:

- Whether consented or as-built scenarios can be considered 'legally secured'.
- Issues with the approach developed by MacArthur Green for The Crown Estate (TCE) to adjust altering the collision figures of planned and consented projects (Trinder 2017) and that Natural England does not advise that it is used.

These uncertainties/issues are set out in detail in our Deadline 6 response [REP6-049] to the Applicant's headroom approach in REP4-014. Therefore, until the uncertainties highlighted by Natural England are addressed and an industry wide approach is agreed we recommend that the default 'standard' approach is appropriate.

Our position remains that CRM should be re-run in full to generate updated collision figures against any agreed changes to turbine design layouts. Where this is not possible for a project, because original bird density data cannot be obtained, we would need to agree whether correction ratios can be calculated (for example following an approach such as that presented in Trinder (2017)). Natural England would need to see the full calculation details for these correction factors. It is Natural England's advice that simplistic scaling of collision figures based on reductions in turbine numbers from the consented number should not be used, for example due to variation in flight activity at different heights and differences in

The Applicant welcomes Natural England's position on this topic and agreement that there is headroom available in the cumulative and in-combination totals, and agrees with Natural England that this is an important matter which requires urgent attention. However, the Applicant also notes that is not compatible with the Norfolk Boreas examination timetable. It is therefore relevant to stress the small contribution the project makes to the total in-combination predicted impacts (e.g. up to two lesser black-backed gull collisions from Alde-Ore Estuary SPA and up to 14 kittiwake collisions from Flamborough and Filey Coast SPA) and as noted by Natural England [REP9-041] and when compared with the very likely large extent of cumulative and in-combination reduction which would result following an update in collision risks for *all* wind farms currently included in the assessment, rather than just the two (Hornsea Project One and Triton Knoll) which the Applicant presented as examples.

The Applicant also acknowledges that the Dudgeon and Race Bank collision assessments used a modified collision model, however it is also important to note that these are the only wind farms that the Applicant is aware of for which this applies (out of a current total number of wind farms in the cumulative assessment of 43).

<p>turbine parameters such as rotor speeds. There are also case-specific issues that need to be addressed: Natural England notes that the Race Bank and Dudgeon assessments didn't use the Band model, and were based on the Folkerts model.</p> <p>As noted during the Norfolk Boreas Issue Specific Hearing on 22nd January 2020, Natural England has been raising the issue of whether as built or consented projects should be considered for in-combination effects with The Crown Estate and we note the need for a strategic approach to this issue. If conducted simply on a project-by-project basis this has significant risks of inconsistency of approach across applications. Therefore, we consider that this issue needs to be addressed strategically on behalf of the whole sector, including developing consensus on an approach. However we do recognise that this is not possible in timescale for the Norfolk Boreas examination.</p>	
<p><b>6.1 SPA's</b> Coherence of the Natura 2000 network relates to securing and maintaining an ecologically coherent network of sites designated for the protection of relevant habitats and/or species across their natural range. It is important therefore that compensatory measures address what is being lost. Considerations should include the scale, location and timing of impacts with respect to the resource currently provided by the network for the species in question. In this case it is in relation to the features supported by the FFC SPA and the Alde-Ore Estuary SPA.</p> <p>We agree that prey enhancement through fisheries management measures and nesting ledge provision for kittiwakes from the FFC SPA, and predator proof fencing for LBBG at the Alde-Ore Estuary SPA have the potential to be considered as appropriate compensatory measures to address collision mortality impacts.</p> <p>The Applicant states that it is progressing this further to provide a fuller derogation case for submission to the examination which will include more detail on the feasibility and deliverability of the possible compensatory measures. We welcome this commitment from the Applicant and advise that any further submission should consider the evidence base and management options and implementation/legal issues, and be informed by the ongoing discussions about compensatory measures for the Norfolk Vanguard and Hornsea 3 projects. We</p>	<p>The Applicant welcomes Natural England's agreement that the proposed compensation options are appropriate for addressing potential impacts. The Applicant submitted a more detailed consideration of compensation options at Deadline 7 [REP7-024] which included consideration of practical and legal aspects for a range of compensation options.</p>



<p>also advise that the potential compensation measures considered in any further submission are not restricted to the most immediately deliverable options (e.g. to just provision of artificial nest sites for FFC SPA kittiwakes) and that a range of compensatory measures are developed, given such measures for collision mortalities are novel, untested and need to satisfy multiple requirements.</p>	
<p>Summary of Natural England Position on HHW SAC Natural England has provided responses to the (8.20) HHW SAC SIP, HHW Position Paper including CSIMP including decommissioning, cable recovery and cable protection for D9 and so will not duplicate our response here.</p>	<p>The Applicant has responded to Natural England’s comments on the HHW SAC control document (SIP and CSIMP) in section 1.9 and cable protection in section 1.13 and therefore will not repeat the comments here.</p>
<p><b>Appendix 1 of REP6-025: Alternatives</b></p>	
<p>5.1 Alternative Conditions Natural England has provided comment on the CSIMP for D9.</p>	<p>The Applicant has responded to these comments in section 1.11.</p>
<p>5.2 Alternative Design Solutions Natural England has provided comment on alternatives numbers of turbines and draught heights as presented by the Applicant throughout Examination.</p>	<p>The Applicant welcomes the comments provided by Natural England throughout the Examination. The Applicant has reduced turbine numbers and increased draught heights, as recognised in [REP9-045] which states, "<i>The Applicant has committed to a number of mitigation measures that Natural England welcome, including further reduction in turbine numbers, and further raising minimum draught height of turbines</i>"(paragraph 1.39) and "<i>Natural England consider that the Applicant has taken all reasonable steps to avoid, reduce and mitigate the impacts of the proposed development on both kittiwakes at FFC SPA and LBBG at Alde-Ore Estuary SPA</i>" (paragraph 1.43).</p>
<p><b>Appendix 2: Compensation</b></p>	
<p>6.1 SPA’s Coherence of the Natura 2000 network relates to securing and maintaining an ecologically coherent network of sites designated for the protection of relevant habitats and/or species across their natural range. It is important therefore that compensatory measures address what is being lost. Considerations should include the scale, location and timing of impacts with respect to the resource currently provided by the network for the species in question. In this case it is in relation to the features supported by the FFC SPA and the Alde-Ore Estuary SPA.</p>	<p>The Applicant has responded to the relevant comments in sections 1.16 and 1.17 of this document.</p>



<p>We agree that prey enhancement through fisheries management measures and nesting ledge provision for kittiwakes from the FFC SPA, and predator proof fencing for LBBG at the Alde-Ore Estuary SPA have the potential to be considered as appropriate compensatory measures to address collision mortality impacts.</p> <p>The Applicant states that it is progressing this further to provide a fuller derogation case for submission to the examination which will include more detail on the feasibility and deliverability of the possible compensatory measures. We welcome this commitment from the Applicant and advise that any further submission should consider the evidence base and management options and implementation/legal issues, and be informed by the ongoing discussions about compensatory measures for the Norfolk Vanguard and Hornsea 3 projects. We also advise that the potential compensation measures considered in any further submission are not restricted to the most immediately deliverable options (e.g. to just provision of artificial nest sites for FFC SPA kittiwakes) and that a range of compensatory measures are developed, given such measures for collision mortalities are novel, untested and need to satisfy multiple requirements.</p>	
<p>6.2 SAC</p> <p>Natural England has provided comment on the detailed In Principle Habitats Regulations Derogation Provision of Evidence, including HHW SAC at D9, and so for the sake of brevity will not replicate this here.</p>	<p>The Applicant has responded to the relevant comments in sections 1.15 and 1.18 of this document.</p>

## 1.12 REP9-042 Natural England’s response to Applicant’s Comments on Responses to the Examining Authority’s Third Round of Written Questions

Summary of Submission	Applicant’s Comments
<b>Marine Mammals</b>	
<p>Marine Mammal Monitoring: Natural England provided additional wording for D7.</p>	<p>The Applicant can confirm that a condition has been agreed with Natural England and the MMO and has been included in the draft DCO submitted for Deadline 10 [Document 3.1, version 7].</p>

Summary of Submission	Applicant's Comments
<p>Natural England has agreed with the Applicant and the MMO some updated wording for a marine mammal monitoring condition within the generation DML which is deemed appropriate. (24.04.20).</p>	
<p><b>Ornithology</b></p>	
<p>The PVA updates</p> <p>Please refer to our comments on REP7-031 regarding the PVA updates, which will be submitted at Deadline 9.</p> <p>The PVA updates in REP7-031 only relate to the EIA scale PVAs and the guillemot FFC SPA PVA run by the Applicant using the Seabird PVA tool, and that no updates have been undertaken by the Applicant to the FFC SPA PVAs undertaken during the Hornsea 3 examination for gannet, kittiwake and razorbill, or the Alde-Ore Estuary SPA PVA undertaken during the Vanguard examination for LBBG, and so our previous concerns/queries regarding these as outlined in our RRs [RR-099] and in REP4-040 and REP7-047 still remain.</p> <p>extent of any potential headroom is not agreed.</p> <p>If this is conducted simply on a project-by-project basis this has significant risks of inconsistency of approach across applications. Therefore, we consider that this issue needs to be addressed strategically on behalf of the whole sector, including developing consensus on an approach. However, we do recognise that this is not possible in timescale for the Norfolk Boreas examination.</p> <p>With regard to the revised collision predictions the Applicant has calculated for the Hornsea Project One 'as built' layout, Natural England notes the queries we have raised in REP6-049 regarding uncertainties over whether the correct density data has been used and concerns regarding use of only Option 1 figures and concerns highlighted regarding site-specific flight heights used in the CRM of Hornsea projects. Whilst these matters are outstanding it would not be safe to assume that Hornsea Project One provides the headroom calculated.</p> <p>Regarding the Applicant's assessment of no AEoI Natural England notes that we have already advised at the Hornsea Project Two and East Anglia 3 examinations onwards that it was not possible to rule out an AEoI on the FFC SPA from operational and consented</p>	<p>The Applicant has reviewed Natural England's comments on the PVA [REP9-049] and welcomes Natural England's agreement that the number of simulations used to obtain counterfactual measures for the Norfolk Boreas assessment has made minimal differences and does not alter the conclusions reached. The Applicant also notes Natural England's advice that this should not be taken as implying this will always be the case (i.e. that counterfactual based on 500 simulations will be very similar to those from 5,000 simulations).</p> <p>The Applicant notes that the PVA updates presented in [REP7-031] were provided to specifically address the request from Natural England to demonstrate that results obtained from smaller numbers of simulations were robust [REP4-040], which has been demonstrated [REP7-031] and agreed by Natural England [REP9-049]. Natural England has previously noted [RR-099] that the PVAs produced for Hornsea Project Three and Norfolk Vanguard and to which the Applicant has made reference in the assessment, were the best available models and thus considered to be suitable for assessment (albeit that Natural England had queries about some of the modelling details). Natural England's position on these PVA was that the nature of Natural England's queries have not therefore prevented them from reaching conclusions on the assessment.</p> <p>Furthermore, as the updates to the PVA tool were delayed by several weeks (from January to March 2020) the Applicant informed Natural England (in a meeting on the 13<sup>th</sup> February 2020 and in a follow up email on the 17<sup>th</sup> February) that there would be insufficient time in the project examination to undertake further PVA simulations and assessment updates, and that only the query about the number of simulations could be addressed (as noted above). The Applicant considers that the PVAs</p>

Summary of Submission	Applicant's Comments
<p>projects due to the level of annual in-combination collision mortality predicted for kittiwake. We also note that the Norfolk Boreas alone predicted impacts of 14 kittiwakes from the FFC SPA and 2 lesser black-backed gulls from the Alde-Ore Estuary SPA are estimations which are underpinned by a number of assumptions, several of which have considerable uncertainty associated with them. Accordingly, Natural England takes a range-based approach to considering impacts. We note Natural England's advice during the Thanet Extension examination was that whilst this project made a small contribution to the in-combination kittiwake collision mortality for the FFC SPA, it could not be concluded that there would be no AEoI on the site by the project, when considered in-combination.</p> <p>With regard to the revised collision predictions the Applicant has calculated for the Hornsea Project One 'as built' layout, Natural England notes the queries we have raised in REP6-049 regarding uncertainties over whether the correct density data has been used and concerns regarding use of only Option 1 figures and concerns highlighted regarding site-specific flight heights used in the CRM of Hornsea projects. Whilst these matters are outstanding it would not be safe to assume that Hornsea Project One provides the headroom calculated.</p>	<p>used in the assessment have been demonstrated to be robust and no further modelling is required.</p>
<p><b>Headroom</b></p> <p>Natural England's position on headroom has been set out previously in REP6-049 and REP7-048. In summary, we acknowledge the work that the Norfolk Boreas Applicant and their consultants have done to consider potential headroom in the in-combination/cumulative collision risk figures by assessing the 'as built' rather than the worst case scenario (WCS). Natural England recognises that headroom is a significant issue, however it is a highly complex one, and it is important to note that there is not yet an agreed way forward at present. The Applicant's approach has also not been subjected to judicial scrutiny. There are issues/uncertainties associated with the Applicant's proposed approach, and issues with the approach developed by MacArthur Green for The Crown Estate (TCE), and hence Natural England's advice that it is not used. Until these issues are addressed and an industry wide approach is agreed we recommend that the default 'standard' approach is appropriate. We do not disagree that there is likely to be some headroom; however the exact extent of any potential headroom is not agreed.</p>	<p>The Applicant welcomes Natural England's position on this topic and agreement that there is headroom available in the cumulative and in-combination totals, and agrees with Natural England that this is an important matter which requires urgent attention. However, the Applicant also notes that is not compatible with the Norfolk Boreas examination timetable. It is therefore relevant to stress the small contribution the project makes to the total in-combination predicted impacts (e.g. up to two lesser black-backed gull collisions from Alde-Ore Estuary SPA and up to 14 kittiwake collisions from Flamborough and Filey Coast SPA) and as noted by Natural England [REP9-041] when compared with the very likely large extent of cumulative and in-combination reduction which would result following an update in collision risks for <i>all</i> wind farms currently included in the assessment, rather than just the two (Hornsea Project One and Triton Knoll) which the Applicant presented as examples.</p> <p>The Applicant acknowledges Natural England's queries [REP6-049] about the data sources used for the Hornsea Project One collision assessment</p>

Summary of Submission	Applicant's Comments
<p>If this is conducted simply on a project-by-project basis this has significant risks of inconsistency of approach across applications. Therefore, we consider that this issue needs to be addressed strategically on behalf of the whole sector, including developing consensus on an approach. However, we do recognise that this is not possible in timescale for the Norfolk Boreas examination.</p> <p>With regard to the revised collision predictions the Applicant has calculated for the Hornsea Project One 'as built' layout, Natural England notes the queries we have raised in REP6-049 regarding uncertainties over whether the correct density data has been used and concerns regarding use of only Option 1 figures and concerns highlighted regarding site-specific flight heights used in the CRM of Hornsea projects. Whilst these matters are outstanding it would not be safe to assume that Hornsea Project One provides the headroom calculated.</p>	<p>and notes that it was for this reason that the worked example presented the collision estimates for the consented project design in order that these could be readily compared to the figures submitted by the project (which the Applicant's estimates correspond to) and which were used as the basis for the consent decision for Hornsea Project One and have been used in subsequent wind farm applications in the cumulative and in-combination assessments. Thus, by presenting a worked example for how to update collision estimates from an agreed turbine design (in this case the consented design) to an alternative one (the built design) it is possible for the reviewer to satisfy themselves of the robust basis for the calculations. In summary, the Applicant's position is that when complete data are available:</p> <ul style="list-style-type: none"> <li>• Present re-worked calculations for the consented design and compare these with the project's final collision estimates to ensure the input data are correct; and</li> <li>• Updating only the turbine parameters (e.g. to the built design), re-run the collision model and obtain revised collision estimates.</li> </ul> <p>Both these steps were presented for Hornsea Project One [REP4-014] and therefore the Applicant considers it to be straightforward for the calculations to be verified by Natural England.</p>
<p><b>Turbine Parameters:</b> Please see our responses regarding the Norfolk Boreas mitigation and updated CRM in EV9-003 and our Deadline 9 response to REP7-031 for further comments regarding the dDCO wording regarding turbine parameters etc. Please refer to our response to REP7-031 on DCO wording.</p>	<p>The Applicant welcomes Natural England's agreement with the revised DCO wording, however the Applicant does not agree that the minimum turbine size needs to be secured in the DCO and provided a detailed explanation for this in response to Q3.2.13 [REP7-017]. In addition, the Applicant has been unable to find any further justification in Natural England's deadline 9 submissions for this request.</p>
<p><b>Elements of precaution</b> We refer back to our responses in REP4-040, REP4-043, REP5-077 and REP7-046 regarding the Applicant's position that individual components of precaution may be justified, but the combination of these generates predictions which are highly over precautionary. In summary, Natural England notes that our understanding is that in the cumulative and in-combination collision assessments the central predicted value (i.e. those for the mean bird</p>	<p>The Applicant notes Natural England's responses and position with respect to individual elements of precaution in assessments, however the Applicant maintains that Natural England's approach to assessment combines these in a manner which results in over-precaution. Additional responses on this topic are provided above in the Applicant's response to [REP9-041].</p>

Summary of Submission	Applicant's Comments
<p>density, mean/central avoidance rate, mean/central flight height) from each individual project assessment is used, rather than the upper figures from any predicted range based on uncertainties in the input data. In any event, for all Round 1 and Round 2 projects the use of a range of figures is simply not possible, because earlier windfarm Environmental Statements did present information to generate ranges of predicted impacts.</p> <p>There are also elements where the assessment may not be precautionary (e.g. the potential limitations in recording of site-specific data on seabird flight heights may have the potential to lead to underestimates of potential collisions and hence assessments may be lacking in precaution in this aspect). Further, for a range of reasons set out in our previous responses the level of uncertainty in the assessments is high, and therefore there is a requirement to be precautionary in our assessment of impacts.</p>	
<p><b>Input data</b></p> <p>In response to Applicants point on input data Natural England reiterates that this is why this needs to be done strategically and outside of the tight deadlines of an examination. Similarly, why this needs to be done in discussions with each individual project/developer and associated SNCB to reach agreement on the appropriate input data used.</p>	<p>The Applicant welcomes Natural England's position on this topic and agreement that there is headroom available in the cumulative and in-combination totals and agrees with Natural England that this is an important matter which requires urgent attention. However, the Applicant also notes that is not compatible with the Norfolk Boreas examination timetable. It is therefore relevant to stress the small contribution the project makes to the total in-combination predicted impacts (e.g. up to two lesser black-backed gull collisions from Alde-Ore Estuary SPA and up to 14 kittiwake collisions from Flamborough and Filey Coast SPA) and as noted by Natural England [REP9-041] compared with the very likely large extent of cumulative and in-combination reduction which would result following an update in collision risks for <i>all</i> wind farms currently included in the assessment, rather than just the two (Hornsea Project One and Triton Knoll) which the Applicant presented as examples.</p>
<p><b>In-combination Assessment:</b></p> <p>Please see our D9 response to the Applicants D8 submission, REP8-027.</p>	<p>The Applicant welcomes Natural England's agreement with the cumulative and in-combination figures presented in [REP8-025] and also Natural England's agreement that these make no material difference to the assessment and therefore the conclusions reached by Natural England.</p>
<p><b>Derogation</b></p>	<p>The Applicant notes that Natural England has provided comments on the Applicant's position statement on derogation [REP6-025] and has also</p>

Summary of Submission	Applicant's Comments
<p>Please refer to Natural England responses for D9 on the derogation and in principle compensation for FFC SPA and Alde-Ore Estuary SPA LBBGs. in response to REP7-025 and REP7-026.</p>	<p>provided comments on the Applicant's more detailed in principle Habitats Regulations Derogation assessment [REP7-024, REP7—025 and REP7-026]. The Applicant welcomes Natural England's constructive comments on the proposed in principle compensation measures and if it is necessary (i.e. if compensation options are requested by the Secretary of State) the Applicant will continue to engage with Natural England to further develop options post consent. See section 1.11 for more detailed responses.</p>
<p>CRM for gannet and lesser black backed gull (LBBG): Natural England notes that in our Deadline 4 response [REP4-040] we advised that an AEoI can be ruled out for gannets from the FFC SPA and LBBGs from the Alde-Ore Estuary SPA from collision mortality from Norfolk Boreas alone. Following the Applicant's revised CRM at Deadline 5 [REP5-059], our advice remained the same (see EV9-003).</p>	<p>The Applicant welcomes Natural England's confirmation that Norfolk Boreas alone will not result in an AEoI for gannet from the Flamborough and Filey Coast SPA or lesser black-backed gulls from the Alde-Ore Estuary SPA.</p>
<p>Onshore Ecology</p>	
<p>Monitoring of residual adverse impacts on the water environment: Natural England note and welcome the updates of the OCoCP as submitted at D8, which address our concerns in relation to water crossings.</p>	<p>The Applicant notes this and has no further comment to make.</p>
<p>Definition of secondary consent bodies: Welcome that the reference in Section 11 of the OCoCP has been updated to reflect wording and submitted at Deadline 8 (Version 4).</p>	<p>The Applicant notes this and has no further comment to make.</p>

### 1.13 REP9-043 Natural England's comments on Additional information to the HHW SAC position paper- Annex 2 Cable Protection Decommissioning Evidence

Row no.	Summary of Submission	Applicant's Comments
1	Summary	Please see section 1.8 for reasoning as to why the Applicant does not consider it appropriate to add such a condition the DCO/dMLs and row 5 in section 1.9

Row no.	Summary of Submission	Applicant's Comments
	<p>In addition, based on the information presented in this document, for decommissioning to be considered as a mitigation measure then there would need to be a DCO/dML condition that restricts the type of cable protection to concrete mattresses (or similar protection).</p>	<p>for reasoning as to why doing so may not achieve Natural England's desired result.</p> <p>The Applicant and Natural England have discussed this matter further and have agreed to include a condition within the DCO which prevents the Applicant from rock or gravel dumping within the HHW SAC (See row 5 of section 1.19 for full condition). Following this commitment Natural England have agreed that the Applicant can consider the decommissioning commitment to be a suitable mitigation measure and they recognise that this significantly reduces the risk of AEoI to the HHW SAC (See the Natural England SoCG ExA.AS-1.D10.V3]).</p>
2	<p>General Comment:</p> <p>Natural England recognises that the proposed cable protection not only increases the probability of removal at the time of decommissioning, but also reduces the footprint of the impact.</p>	<p>The Applicant believes this comment to also relates to the comments in row 4 of this Table and row 13 of section 1.14 regarding low profile cable protection which is likely to allow natural processes to function.</p> <p>As discussed above the Applicant has made the commitment to no rock dumping within the HHW SAC. The Applicant and Natural England therefore now agree that the Applicant is limited to using low profile methods of cable protection. This is further reinforced by Chapter 5 of the ES [APP-218] section 5.4.14.2 and Table 5.25 which shows that cable protection due to unburied cables would be up to 0.5m high.</p> <p>This therefore reduces the potential impacts of cable protection on the physical processes that govern the Annex I Sandbanks and by association their benthic communities. Natural England have acknowledged in the SoCG [ExA.AS-1.D10.V3] that the risk has been significantly reduced by these latest commitments.</p>
3	<p>Natural England highlights that whilst the impacts from cable protection are no longer considered to be permanent; the placement of cable protection is considered to have a lasting change on the habitat over a period of 30 years (life time of project) and beyond, as recovery will not be immediate. There is no evidence presented that demonstrates what the impacts are likely to be on Annex I habitats and site conversation objectives from such a temporally</p>	<p>The Applicant recognises that there is limited research on how sandy habitats would recover following the removal of the cable protection products reviewed in the Cable Protection Decommissioning Evidence [REP6-018]. This is due to the fact that some of the products are relatively new to market and have been designed to address the decommissioning concern which has only recently become highly relevant to the offshore wind industry. However, in</p>



Row no.	Summary of Submission	Applicant's Comments
	<p>long time and that habitat recovery is achievable to its pre-impacted state. Therefore, it is our view that a 30 years change in habitat cannot be considered to be a small scale loss/change. In addition there is no evidence presented on the potential for any wider surrounding area impacts from the presence of the cable protection and its removal. Therefore, due to the uncertainties any assessment needs to include precaution. For decommissioning to be considered as mitigation then this would need to be restricted to concrete mattresses (or similar type product).</p> <p>Concrete mattresses</p> <p>Based on the information presented the Applicant is accepting the industry concerns in relation to laying concrete mattresses and potential for them to be removed. Therefore, for decommissioning of cable protection to be considered as mitigation there would need to be a DCO/dML condition specifying concrete mattress (or similar type product) for cable protection. Noting that if restricted to concrete mattress or similar product, modifications to achieve removal at time of decommissioning would be required and should inform any in principle decommissioning plan</p>	<p>row 5 of section 1.9 of this document the Applicant does provide evidence of recovery from other industries.</p> <p>As stated above section 1.8 and row of 5 of section 1.9 the Applicant does not consider that commitment to concrete mattresses (or similar type product) would be appropriate or achieve the required outcome. However as Natural England and the Applicant have reached agreement on the new condition stated in row 5 of section 1.9, the concerns raised here by Natural England have been addressed.</p>
4	<p><b>Duramat</b></p> <p>Natural England has limited experience of Duramat's being used in the marine environment. However we note that it is effectively made of plastic with a glass coating. Therefore, before this cable protection could be agreed there would need to be confidence that the mats would not degrade along with a guarantee of recovery. However, we do note the advantages of the low profile which is likely to allow natural processes to function.</p>	<p>The Applicant notes Natural England's preference for the Duramat option due to its <i>"low profile which is likely to allow natural processes to function"</i> (see row 2 of this table above). As a point of clarification, it should be noted that the Duramat system does not have a glass coating and the CSUB system is made from Glassed Reinforced Plastic.</p>
5	<p>Duramat</p> <p>Can the CSUB (Duramat) system be used alone? It is mentioned that it can be held in place by ballast, how likely is that to be rock armouring?</p>	<p>Condition 3(1)(g) of the Transmission DMLs was agreed with Natural England on the 5<sup>th</sup> of May 2020 which states:</p> <p><i>'in the Haisborough, Hammond and Winterton Special Area of Conservation, cable protection measures must not take the form of rock or gravel dumping'.</i></p>



Row no.	Summary of Submission	Applicant's Comments
		Therefore, rock armouring would not be used as ballast for the CSUB protection cover.

### 1.14 REP9-044 Natural England's comments on Assessment of Additional Mitigation in the Haisborough, Hammond and Winterton Special Area of Conservation (Version 2)

Row no.	Summary of Submission	Applicant's Comments
1	We reiterate that we can agree that decommissioning cable protection may change the impact to temporary, however, there is still a further consideration of significant temporal impacts from a lasting impact for >30 years. There is no evidence presented of what the impacts are likely to be on Annex I habitats and site conservation objectives from such a temporally long time and that habitat recovery is achievable to its pre-impacted state. It therefore cannot be considered with certainty to be a temporary impact. In addition, it is our view that 30 years of change in habitat cannot be considered to be a small scale loss/change.	As concluded in the HHW SAC position paper [REP5-057] the Applicant maintains that it would be possible to rule out AEoI even without the commitment to decommissioning cable protection. The commitment was made (in consultation with Natural England) to give Natural England further assurance that any potential effects on the HHW SAC would be mitigated as far as possible. As demonstrated in the Assessment of Additional Mitigation in the Haisborough, Hammond and Winterton Special Area of Conservation (Version 2) [REP6-019] and further discussed in row 9 of section 1.9, the Applicant considers that it has met all of Natural England's tests for an impact to be considered small scale as outlined in their guidance [REP1-057].
2	Para 20. As set out above whilst the removal of cable protection would potentially change the impact to temporary, the longevity of the impact and uncertainty in relation to recoverability means that Natural England is unable to say beyond reasonable scientific doubt no AEoI in relation to HHW SAC. In addition we would have expected impacts to Annex I Sandbank to have also been taken into consideration.	The expected impacts to Annex I Sandbank have been taken into consideration in section 5.2 of the Assessment of Additional Mitigation document. They are also considered within the Information to Support HRA Report [APP-201].
3	Para 28 Reference is made to cable protection, but it is not clear if that relates solely to concrete mattresses (or similar type product) as set out in the additional mitigation	The assessment is based on the worst case scenario of cable protection due to unburied cables occupying an area 20,000m <sup>2</sup> with a volume of 10,000m <sup>3</sup> (and a total overall area of 32,000m <sup>2</sup> which

Row no.	Summary of Submission	Applicant's Comments
	<p>measures. We advise that it is clearly indicated whether the assessment is in relation to ideally only concrete mattress or, if still required, the worst case scenario for cable protection. However, if it is worst case scenario Natural England advises that decommissioning is not considered as a mitigation measure in which to be reliant on in the decision making process.</p>	<p>includes protection at cable crossings). For the purposes of the assessment it is not relevant which type of cable protection occupies that area and volume, as whatever cable protection is chosen will be fully decommissioned regardless whether it is a concrete mattress or not. As noted above in section 1.13 the height of the cable protection is limited to 0.5m and that is what has been assessed. This is stated in paragraph 60 of the document [REP6-019]. The Assessment has been updated for Deadline 10 and it has been made clear in paragraph 28 as well as 60 that the assessment is based on cable protection being 0.5m in height.</p> <p>It should be noted that the area and volume of the worst case scenario has now been reduced to 28,000m<sup>2</sup> and 17,200m<sup>3</sup> following agreement that BT cables within the HHW SAC can be cut (Row 3 in Table 1.10). This is reflected in the updated HHW SAC control document(s) (CSIMP and SIP) which have been submitted at Deadline 10.</p> <p>Following the Applicant's new commitment to no rock dumping in the HHW SAC (see row 5 in 1.9), Natural England and the Applicant are in agreement that decommissioning of cable protection can be considered as a commitment to reduce effects from permanent to long-term temporary and therefore should be considered in the decision making process.</p>
4	<p>Favourable condition: Please see our response at Deadline 5 [REP5 – 078] in relation to the favourable condition status of the site:</p>	<p>Please see the Applicant's response to [REP-078] in the Applicant's Comments on Deadline 5 Submissions [REP6-013] at section 1.9.</p>
5	<p>Long term loss of Annex I Sandbank: Natural England notes that Norfolk Vanguard and Boreas consider only the delineated Sandbank feature and buffer zone as areas of Annex I Sandbanks that are to be managed for conservation as Sandbanks. However, the sediment between Sandbanks is also important for the functioning of the Sandbanks, as well as for Annex I Reef formation, and therefore impacts occurring between features may still</p>	<p>Please see the Applicant's response to these same comments (which were also made by Natural England in relation to the CSIMP and SIP) at Row 9 section 1.9.</p> <p>In response to the final point regarding minimising impacts to an acceptable level/avoided, the Applicant welcomes Natural England's recognition that the mitigation measures secured in the HHW SAC</p>

Row no.	Summary of Submission	Applicant's Comments
	<p>be detrimental to the Annex I feature(s). A 2016 SNCB survey identified that the species composition in these areas was similar to that of the species composition within the Annex I features. Put simplistically, if these areas are sandy and dynamic they are considered important to / part of the Sandbank features and if stable and mixed sediment have the potential to support Reef habitat. The only areas thought not to be providing this important 'functionality' role is where exposed oil and gas pipelines transect the site. Therefore, it cannot be determined that the impacts are small scale and inconsequential. However, we acknowledge that if mitigation measures were to fully deliver the desired outcome then the impacts to Annex I reef could potentially be minimised to an acceptable level/avoided.</p>	<p>control document (8.20) would avoid AEoI on Annex I reef features if delivered. The Applicant explains in row 5 of section 1.10 and row 10 of 1.9 above why there can be confidence in the delivery of these measures such that they can be relied on to reach a conclusion of no AEoI. The new agreed Condition 3(1)(g) (see row 5 of section 1.9) provides further confidence that the decommissioning mitigation measure would be fully delivered.</p>
6	<p>Section 5.2 Long term loss of Annex I Sandbank: How the impacts to Annex I Sandbanks are described in this section may mean that the conservation objective for the site is not delivered.</p>	<p>The Applicant is unsure what is being referred to here, potentially it is the following statement: <i>"As discussed in section 5.1, there will be no loss of an Annex I priority natural habitat as a result of cable protection as there are no priority natural habitats in the HHW SAC."</i> Within section 5.1 of the document the footnote explains this statement: <i>As stated in the Habitats Directive, priority natural habitat types means natural habitat types in danger of disappearance, which are present on the territory referred to in Article 2 and for the conservation of which the Community has particular responsibility in view of the proportion of their natural range which falls within the territory referred to in Article 2; these priority natural habitat types are indicated by an asterisk (*) in Annex I of the Habitats Directive;"</i> No habitat within the HHW SAC falls within this definition.</p>
7	<p>Please note that this does not take into account any required mitigation for archaeological finds. Please see our deadline 5 response REP5 - 081 for further information:</p>	<p>Please see row 10 in section 1.9 for the Applicant's response to this same comment provided by Natural England in response to the updated CSIMP and SIP.</p>

Row no.	Summary of Submission	Applicant's Comments
8	<p>Please be advised that Natural England does not consider that small impacts to Annex I reef or Sandbank to be De minimis especially if cable installation bisects the centre of a reef feature.</p>	<p>As described in row 9 of section 1.9 the Applicant has met all of the tests described in Natural England's guidance [REP1-057] including the test for <i>de minimis</i>.</p> <p>The Applicant has committed to avoiding reef where possible, and if that is not possible to take a route that would cause as small an effect as possible (See Appendix 1 of the outline HHW SAC control document) therefore the route would not bisect the centre of a reef feature. The final cable route will be agreed through the final HHW SAC control document (8.20) at which point Natural England would be able to comment on the route design to ensure effects on Annex I features are minimised as far as possible.</p>
9	<p>In-combination habitat loss with Norfolk Vanguard: We note that this section only considers the impacts from cable protection and not the other elements of the work.</p>	<p>This assessment was completed at the request of Natural England following the screening out of impacts associated with cable protection on <i>S.spinulosa</i> reef (Habitat loss) in the information to support HRA report [APP-201]. As described in the report, the Applicant reasoned that as <i>S.spinulosa</i> is likely to colonise the cable protection, there would be no overall habitat loss. The Applicant maintains that position but acknowledges that Natural England hold a different position. Therefore, the purpose of this assessment was to supplement the Information to support HRA Report, where all other potential impacts are considered.</p>
10	<p>Scale of habitat loss: Natural England notes that the references used are prior to the Sweetman Ruling and are for different Annex I habitats therefore there is limited relevance for this Project.</p>	<p>While the Applicant accepts that decisions must be made on a case by case basis, with no two projects the same, it is helpful to draw on case law to provide context. The examples the Applicant has provided are:</p> <ul style="list-style-type: none"> <li>• Hinkley Point C - habitat loss of a small area of potential Sabellaria reef within the rock armour barge berthing and unloading area. This area equated to less than 0.05% of the SAC reef feature and was not considered significant.</li> </ul>

Row no.	Summary of Submission	Applicant's Comments
		<ul style="list-style-type: none"> <li>○ While this refers to <i>Sabellaria alveolata</i> reef from the Severn Estuary SAC, rather than <i>S. spinulosa</i> in the HHW SAC, both species of the Sabellaria genus develop biogenic reefs by building sandy tubes, providing a habitat which supports increased biodiversity and neither species are a priority habitat.</li> <li>○ As a result, there are some similarities between Norfolk Boreas and the Hinkley Point C example, although noting that the percentage of habitat loss for Hinkley Point C is an order of magnitude greater than that of Norfolk Boreas and still a conclusion of no AEoI was reached.</li> <li>● Walney Extension - habitat loss of intertidal mudflats and sand flats due to cable installation and rock armour. 0.41% of overall 600ha of feature was affected and the Appropriate Assessment concluded no AEoI.             <ul style="list-style-type: none"> <li>○ While this refers to intertidal sandflats, rather than subtidal sandbanks or reef, the effect resulted from cable installation for an offshore wind farm and the percentage habitat loss was two orders of magnitude greater than Norfolk Boreas and still a conclusion of no AEoI was reached. Natural England acknowledged that beyond reasonable scientific doubt the extent of the potential impact area would be very small relative to the size of the SAC.</li> <li>○ The intertidal sand flats affected by Walney Extension support a diverse range of infaunal species which are important to birds features of an SPA, whereas this is not the case for the HHW SAC Sandbanks</li> </ul> </li> <li>● Kentish Flats Extension - habitat loss of 0.003% of Special Protection Area (SPA). The Secretary of State (SoS) and Natural England agreed this loss to be negligible.</li> </ul>

Row no.	Summary of Submission	Applicant's Comments
		<ul style="list-style-type: none"> <li>○ While this refers to an SPA rather than SAC, the loss of 0.003% of habitat loss on this occasion was deemed sufficiently small to be screened out as having no Likely Significant Effect.</li> </ul> <p>Natural England (2016) provides a review of a range of case studies and concludes that the percentage area of habitat loss in Natura 2000 sites that the European court has considered significant is 0.004% to 6.25%. The habitat loss associated with Norfolk Boreas represents 0.0019% of the HHW SAC and it is important to note this will be a long-term temporary loss and not permanent.</p> <p>The Applicant has also explained how the Project complies with Natural England's own guidance on small scale loss within SACs in relation to cable protection [REP1-057].</p> <p>In addition, the Sweetman Rulings (CJEU C-323/17 and C-164/17) do not alter the approach to determining scale of habitat loss and whether this can be considered de minimis or inconsequential in accordance with Natural England's guidance as referred to above. The Applicant accepts that appropriate assessment must be complete, precise and with definitive findings, without lacunae, and this is what has been presented by the Applicant. The assessment has been undertaken on a worst case basis using the best available information, and the mitigation proposed by the Applicant is certain to be effective and fully secured. The Applicant's evidence has demonstrated that there is currently sufficient space to microsite to avoid impacts on the HHW SAC, and that there can be high confidence that this position will not change prior to construction notwithstanding the introduction of fisheries management measures.</p>
11	Whilst we recognise that the Sweetman Rulings focus on loss of priority habitats, the Rulings are still applicable to assessing permanent losses to Annex I habitats such that the conservation objectives for the site are not hindered.	Please see our comments above in relation to the Sweetman Rulings (CJEU C-323/17 and C-164/17).

Row no.	Summary of Submission	Applicant's Comments
		<p>The Applicant's Assessment of Additional Mitigation in the HHW SAC (Version 2, provided in Annex 2 of Additional information for the HHW SAC position paper (REP6-019)) explains that there will be no hindrance of the conservation objectives of the HHW SAC due to the various mitigation commitments made by the Applicant. The Applicant has committed to use no cable protection in the priority areas to be managed as Annex I reef within the HHW SAC, unless otherwise agreed with the MMO in consultation with Natural England. This commitment ensures that the proposed management measures for the site will not be impacted and the targets for restoring Annex I reef will not be hindered. The Applicant has also committed to decommission cable protection at the end of the Norfolk Boreas project, ensuring that there will be no permanent habitat loss as a result of cable protection. The assessment of habitat loss on the HHW SAC, taking into account this mitigation, demonstrates that any long-term temporary small scale loss of habitat within the SAC would not affect the form and function of the Annex I Reef and Annex I Sandbanks.</p> <p>Following the Applicant's commitment to decommission cable protection in the HHW SAC and to use no rock dumping in the HHW SAC, Natural England and the Applicant are in agreement that decommissioning of cable protection can be considered as a commitment to reduce effects from permanent to long-term temporary. As reflected in the SoCG between the Applicant and Natural England [ExA.SoCG-17.D10.V4] Natural England agree that this significantly reduces the risk of AEol to the HHW SAC.</p>
12	<p>Effect on structure, function and supporting processes:</p> <p>Whilst we agree with the Applicant that the impacts to Annex I Sandbanks are persistent i.e. at any one point in time it may be exposed or buried we have to be precautionary in our assessment of the worst case scenario i.e. that the cable protection is exposed more than it is buried.</p>	<p>Following the agreement of Condition 3(1)(g) (7) (see row 5 in section 1.9) Natural England and the Applicant have agreed that the cable protection is limited to low profile options (see row 2 in section 1.13). This means that the cable protection is likely to be buried more of the time than if it was a higher profile form of protection.</p>

Row no.	Summary of Submission	Applicant's Comments
13	Natural England agrees that if cable protection is limited to concrete mattresses (or similar type products) then the likely elevation of the protection ~ 50cm is likely to have the additive benefit of enabling natural processes to occur.	<p>As discussed in row 2 of 1.13 above that Applicant considers that it is limited to installing cable protection of no more than 50cm within the HHW SAC, as this is what has been assessed in the HRA and ES.</p> <p>Following agreement on the new Condition 3(1)(g) (see row 5 in section 1.9). It is agreed with Natural England that a low profile option of cable protection will be used which will enable natural processes to occur uninhibited. The Applicant understands that this has changed Natural England's position on the physical effects on the form and function of Annex I Sandbanks however due to the long term nature of the cable protection resulting in habitat loss for the communities they are unable conclusively to rule out AEoI.</p> <p>Importantly, Natural England does confirm in the SoCG that the new commitments have "significantly reduced the risk of AEoI" [ExA.AS-1.D10.V3].</p>

### 1.15 REP9-045 Natural England's Norfolk Boreas Position Statement Regarding Mitigation and Compensation

Row no.	Summary of Submission	Applicant's Comments
<b>Special Area of Conservation (SAC)</b>		
1	<p><b>Article 6(3) Assessment</b></p> <p>The Secretary of State (SoS), acting as the relevant competent authority for this project, will need to ensure that it has acted in accordance with Article 6 of the Habitats Directive, as informed by the relevant judgments of the Court of Justice of the European Union ("CJEU"), including Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw (C-127/02).</p> <p>Therefore, competent authorities – taking account of conclusions of the appropriate assessment – in the light of the site's conservation objectives are</p>	Noted.



Row no.	Summary of Submission	Applicant's Comments
	to authorise activity only if they are certain it will not adversely affect the integrity of the site, and no reasonable scientific doubt remains.	
2	<p>CJEU in <i>Holohan &amp; Others v An Bord Pleanala (C-461/17)</i> stated that:  <i>34 The [appropriate] assessment carried out under that provision may not have lacunae and must contain complete, precise and definitive findings and conclusions capable of dispelling all reasonable scientific doubt as to the effects of the proposed works on the protected area concerned...</i>  <i>37 ... all aspects which might affect [the conservation] objectives must be identified and since the assessment carried out must contain complete, precise and definitive findings in that regard, it must be held that all the habitats and species for which the site is protected must be catalogued. A failure, in that assessment, to identify the entirety of the habitats and species for which the site has been listed would be to disregard the above mentioned requirements and therefore ... would not be sufficient to dispel all reasonable scientific doubt as to the absence of adverse effects on the integrity of the protected site...</i></p>	<p>Noted. The Applicant accepts that appropriate assessment must be complete, precise and with definitive findings, without lacunae, and this is what has been presented by the Applicant. The assessment has been undertaken on a worst case basis using the best available information, and the mitigation proposed by the Applicant is certain to be effective and fully secured. The Applicant's evidence has demonstrated that there is currently sufficient space to microsite to avoid impacts on the HHW SAC, and that there can be high confidence that this position will not change prior to construction notwithstanding the introduction of fisheries management measures.</p>
3	<p><b>Article 6(4)</b>            In accordance with Article 6(4) of the Habitats Directive, if the Secretary of State, acting as competent authority, is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest it may agree to the plan or project notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be). If the Secretary of State makes this decision they must secure any necessary compensatory measures in order to ensure that the overall coherence of Natura 2000 is protected. Natural England can provide ecological advice on the adequacy of those compensatory measures.</p>	<p>The Applicant's firm position is that there is no adverse effect on integrity as a result of the Project alone or in-combination with other plans and projects. The Applicant has submitted a derogation case and in-principle compensatory measures entirely without prejudice to this position. The Applicant notes that Natural England agrees with the suitability and adequacy of the in-principle compensatory measures proposed to ensure that the overall coherence of Natura 2000 is protected, and the Applicant has proposed DCO drafting to secure these compensatory measures in the event that this is required.</p>
4	<p><b>Current Position - Annex I Sandbanks and Reefs</b>            Natural England advise that sufficient baseline evidence has been provided to inform an assessment of the impacts to Annex I Sandbanks and Reefs feature of Haisborough Hammond and Winterton (HHW) SAC. However, Natural England continue to disagree with the conclusions of the Applicants' Environmental Impact Assessment and supporting documents as submitted during examination.</p>	<p>The Applicant's position on all matters regarding the HHW SAC is provided in the Applicant's position paper [REP5-057].</p> <p>The Applicant acknowledges that agreement has not been reached on the effects of the project on Annex I Sandbanks and Annex I reef, however as demonstrated by the SoCG between the Applicant and Natural England submitted at Deadline 10 [ExA.SoCG-17.D10.V4], these are mainly in relation the Applicant's findings of no AEOI within the Information to</p>

Row no.	Summary of Submission	Applicant's Comments
		<p>Support Habitat Regulations Assessment and supporting assessments and not the "Environmental Impact Assessment" as stated here.</p> <p>As stated in row 13 of section 1.14, the Applicant understands that recent commitments have changed Natural England's position on the physical effects on the form and function of Annex I Sandbanks however, due to the long term nature of the cable protection resulting in habitat loss for the communities, they are unable conclusively to rule out AEoI. Natural England does however recognise in the SoCG that the new commitments have "significantly reduced the risk of AEoI" [ExA.AS-1.D10.V3].</p>
5	<p><b>Cable protection</b></p> <p>In Natural England's view, even with the proposed reduction in the number of export cables from six to two by using a High Voltage Directional Current (HVDC) the remaining proposed levels of cable protection would constitute a lasting and potentially irreversible impact on both designated site features, thereby hindering the conservation objectives of the site. Annex I Sandbanks and Reefs features within the site are both in unfavourable condition. Consequently, Natural England cannot be certain that cable protection will not adversely affect the integrity of the site.</p>	<p>As stated above the Applicant has committed to no rock or gravel dumping within the HHW SAC (see row 5 of section 1.9). This along with the worst case scenario height of 0.5m assessed within the ES (see row 2 section 1.13) does limit the Applicant to low profile cable protection. The Applicant understands that the recent Condition 3(1)(g) has changed Natural England's position on the physical effects on the form and function of Annex I Sandbanks however, due to the long term nature of the cable protection resulting in habitat loss for the communities, they are unable conclusively to rule out AEoI. Natural England does however recognise in the SoCG that the new commitments have "significantly reduced the risk of AEoI" [ExA.AS-1.D10.V3].</p>
6	<p><b>Sandwave levelling</b></p> <p>Although sandwave levelling has been proposed as a means of reducing the potential requirement for cable protection, Natural England highlights that there is insufficient evidence to demonstrate that full recovery of the Sandbank system is achievable and within the affected Annex I Sandbank systems. This is because there is insufficient certainty that there will not be a need for cable protection over the lifetime of the project.</p>	<p>Natural England states that their main concern about sandwave levelling is that it will not be successful and therefore cable protection may be required. As stated above the Applicant has now made commitments which allay some of Natural England's concerns regarding cable protection and therefore these commitments should also reduce concerns with regard to sandwave levelling.</p>
7	<p><b>Sediment disposal</b></p> <p>Natural England is content that the Applicant has demonstrated that there are suitable disposal locations for sandwave levelling operations, that would both retain the sediment within the Sandbank system to allow for its recovery and avoid impacts to the Annex 1 Reef feature. However, changes</p>	<p>Please see the SoCG between the Applicant and Natural England submitted at Deadline 10 [ExA.SoCG-17.D10.V4] for the latest position by both parties on this matter. Natural England, the MMO and the Applicant agree that it is for the SoS to determine whether such a condition is required.</p>

Row no.	Summary of Submission	Applicant's Comments
	to sediment composition at the disposal locations has not been resolved (i.e. the 95% similar sediment grain size condition).	
8	<p><b>Micro-Siting</b></p> <p>Natural England cannot be certain that avoidance of Annex I Reef habitats through micro-siting the cable is achievable and therefore that it would not hinder the management measures put in place to restore Annex I Reef from fisheries pressures, particularly if cable protection was needed.</p>	<p>The Applicant's position on micrositing has not changed from that detailed in section 2.1 of the Applicant's HHW SAC position paper [REP5-057].</p>
9	<p><b>Consideration of Adverse Effect on Integrity</b></p> <p>Natural England's advice is that adverse effects on site integrity should be addressed at the time of Application. 1 The failure to do so would leave a number of substantial issues to be resolved by the Marine Management Organisation (MMO) prior to construction. It should be noted that if uncertainties about the impact of the development are not fully resolved at the time of consenting, there is a risk that there will be considerable project delays prior to and during construction whilst proper processes are followed and these are finally resolved.</p>	<p>The Applicant agrees that adverse effects on site integrity should be considered at the consenting stage. The Applicant has submitted significant evidence to demonstrate that it can be concluded that there is no adverse effect on integrity at the consenting stage [APP-201, REP5-057 and its appendices, REP6-016 and its appendices, REP6-019].</p>
10	<p><b>Additional Evidence Provided by the Applicant [D6-8]</b></p> <p>1.13 The Applicant has provided various documents as evidence of further mitigation measures proposed to reduce the risk of adverse effect on integrity. These included an updated Haisborough Hammond and Winterton (HHW) SAC site integrity plan (SIP) and Additional Mitigation document including Assessment of the addition mitigation in HHW SAC; HHW SAC Cable Specification, Installation and Monitoring Plan (CSIMP), cable protection decommissioning note, BT cable letter of comfort, HHW SAC position statement.</p> <p>The additional documents provided and steps taken by the Applicant are welcomed and considerably reduce the risk of an adverse effect on integrity. This is because they provide greater confidence that cable protection will not be needed, and that the potential consequential impacts from sandwave levelling impacts could be minimised or avoided. However, they do not completely remove the need for cable protection over the lifetime of the project and therefore, the additional evidence is not sufficient to remove all reasonable scientific doubt as to the absence of adverse effects on the integrity on the protected Annex I Sandbanks and Reefs as a result of installation of cable protection over the life time of the project.</p>	<p>The Applicant notes this position and in addition would like to highlight that the area of disagreement relating to the possible effects of cable protection on Annex I Sandbanks (and by association sandwave levelling, see row 7 of this Table) have now been partly resolved as the Applicant is committed to low profile cable protection (see row 13 section 1.14).</p> <p>Following the Applicant's commitment to no rock or gravel dumping within the HHW SAC, Natural England have agreed that this significantly reduces the risk of AEoI due to cable protection (see the SoCG ExA.AS-1.D10.V3).</p>

Row no.	Summary of Submission	Applicant's Comments
11	<p><b>Mitigation Proposed by the Applicant</b></p> <p>a) Cable protection</p> <p>1.15 The Applicant has undertaken a further review of data sets to determine where cable protection is most likely to be needed to be placed and thus further reducing the amount of cable protection within the HHW SAC from 10% to 5%. In addition the Applicant has committed to further reduce cable protection required at cable crossings within HHW SAC, with the support of BT, by removing any disused telecom cables that cross the export cable route.</p> <p>1.16 The Applicant has committed to follow a cable burial hierarchy i.e. to always attempt to re-bury a cable before using cable protection, and a requirement to seek a new marine licence for any new areas of cable protection which might be required. In addition, the Applicant has committed to agree the cable route, to continue to explore opportunities to minimise the impacts from cable installation, as well as to agree the location, extent, type and quantity of any cable protection with the MMO in consultation with Natural England prior to deployment. All of these commitments are welcomed and have also been secured in the updated development consent order / deemed marine licence (DCO/dML).</p> <p>1.17 A commitment has also been made by the Applicant to place no cable protection in the areas the Applicant has termed priority areas to be managed as reef i.e. fisheries byelaw/management areas to aid the recovery of Annex I reef.</p> <p>1.18 Natural England welcomes the refinement of the cable installation methodology (including prohibiting the use of jack up vessels in the HHW SAC) and the reduction in cable protection estimates and locations is positive.</p>	<p>The Applicant notes that the further mitigation proposed has been welcomed by Natural England and that Natural England agrees that the additional commitments have been appropriately secured in the updated dDCO.</p>
12	<p><b>Decommissioning</b></p> <p>1.19 The Applicant has drawn up a decommissioning plan that provides evidence on the feasibility of the removal of cable protection, which it suggests is more likely to be possible for concrete mattresses (or similar type product). Natural England welcomes the potential to successfully remove any cable protection. If removal could be achieved, then whilst the impacts would no longer be permanent, which is welcomed, they will still last for the lifetime of the infrastructure (30 years) and potentially longer as a residual</p>	<p>The Applicant wishes to clarify that Annex 2 of the Additional Information to the HHW SAC position paper: Cable Protection Decommissioning Evidence [REP6-018], is not a decommissioning plan. The document was provided to give Natural England confidence that there are types of cable protection on the market which can be decommissioned, thereby providing supporting evidence for the Applicant's commitment to decommission cable protection within the HHW SAC.</p>

Row no.	Summary of Submission	Applicant's Comments
	<p>impact. Therefore, because this impact is lasting/long term and site recovery wouldn't be assured, Natural England's view is that reasonable scientific doubt remains regarding the impact of the proposals on the conservation objectives for the site. Accordingly a precautionary approach is required. If it is considered that certain types of cable protection could be modified to enable a greater success of recovery/removal at decommissioning, whilst reducing wider designated site impact, then we advise that this would need to be reflected in the DCO/dML to ensure this mitigation is secured.</p>	<p>As stated above, the Applicant has agreed a new commitment to no rock or gravel dumping within the HHW SAC. This has addressed Natural England's concerns that decommissioning would not be possible.</p> <p>As demonstrated in row 9 section 1.9 the Applicant has met all of Natural England's tests and demonstrated that impacts would be small scale and therefore not have an AEoI.</p>
13	<p>1.20 Overall, whilst the additional work undertaken to refine the project parameters is welcomed and serves to considerably reduce the impacts of the project on the interest features of HHW SAC and the likelihood thereof, Natural England's overall position remains that an adverse effect on integrity cannot be excluded beyond all reasonable scientific doubt.</p>	<p>The Applicant welcomes Natural England's acknowledgment of the work undertaken to refine parameters and that this reduces the impacts of the project on the interest features of the HHW SAC. The Applicant also wishes to again draw attention to the further commitment (which should further reduce this probability) to no rock or gravel dumping within HHW SAC which as noted in the SoCG, significantly reduces of the risk of AEoI. T</p>
14	<p><b>Additional Measures that could Avoid/Reduce/Mitigate impacts</b></p> <p>1.21 Natural England notes that the EC Guidance<sup>2</sup> highlights that a proposal put forward under Article 6 (4) should be 'the least damaging for habitats, for species and for the integrity of the Natura 2000 site, regardless of economic considerations, and that no other feasible alternative, exists that would not affect the integrity of the site.'</p> <p>1.22 To assist in this regard we are providing advice in this section on potential alternative measures that may help avoid/reduce/mitigate the impacts of the proposed development and we feel therefore warrant consideration.</p> <p>Avoid</p> <p>1.23 Natural England notes that the cable route could be taken to the south avoiding the HHW SAC entirely. However, it was presented in the evidence plan process for Norfolk Vanguard that the Crown Estate was opposed to this due to potential implications for other industries such as aggregates. It is noted that the Boreas Cable route is shared with Norfolk Vanguard and therefore the position would be the same. We have suggested previously that this alternative warranted consideration.</p>	<p>The Applicant provided clear justification as to why it is not possible to avoid the HHW SAC in its response to written question Q3.8.3.4 of the Third round of written questions [REP7-017]. In that response the aggregate activity to the south of the HHW SAC is also referenced as a hard constraint.</p>

Row no.	Summary of Submission	Applicant's Comments
15	<p><b>Reduce</b></p> <p>1.24 Natural England considers that the Applicant has taken all reasonable steps to reduce the impacts of the proposed development on both of the designated features of HHW SAC and we welcome this effort.</p>	<p>Noted, and welcomed.</p>
16	<p><b>Mitigate</b></p> <p>1.25 A commitment to surface-laid cables and the use of marker buoys would remove the need for cable protection altogether. This has been achieved for the Lincs Offshore Wind Farm in The Wash and North Norfolk Coast SAC and is currently also being employed by The Wash Harbour Masters to protect the Race Bank offshore wind cables. We continue to advise that this alternative should be considered.</p>	<p>The Applicant has considered marker buoys as a possible mitigation measure, however due to the water depths within the HHW SAC, the mobile sediment conditions, the distance offshore and possible risks to Health and Safety of other marine users it has not been possible to commit to this method of cable protection. It is also considered that any benefits achieved by this method of cable protection may be outweighed by disturbance caused from cable movements on the seabed and resulting repair works being undertaken due to damage to the cable, both of which could cause significant disturbance to the biological communities.</p>
17	<p>1.26 We note that the Applicant has not considered the suggestion of a condition to dispose of Sandwave clearance sediment in habitats of similar particle size. Whilst the Applicant has indicated that it is committed to ensuring disposal of sediment in areas adjacent to the clearance it remains unclear if these areas will have similar grain size and how this will be demonstrated, we do not advise that the condition as written will achieve the desired outcome. However, we remain committed to help resolve this issue going forwards.</p>	<p>The Applicant has considered this in great detail and has provided multiple submissions on this point [REP4-014], [REP8-015] and through the SoCG with Natural England [REP2-054], [REP6-033] and [ExA.SoCG-17.D10.V4]. As Natural England agreed in Issue Specific Hearing 4, it would be very difficult to word such a condition so that it could be discharged and enforced. The Applicant provided robust reasoning in [REP8-015] as to why it does not consider such a condition appropriate and the mitigation which the Applicant has committed to is a far more reliable method of ensuring that the seabed sediment is as similar as possible. As noted in the SoCG with Natural England [ExA.SoCG-17.D10.V4], this issue is also relevant to Norfolk Vanguard and Hornsea Project Three and therefore it is assumed that any determination made for those projects on this matter will also apply to Norfolk Boreas.</p>
18	<p><b>Compensatory measures</b></p> <p>1.27 As stated above (Section 1.1), under Article 6(4) of the Habitats Directive, the project may be permitted if the Secretary of State is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest.</p>	<p>The Applicant welcomes Natural England's agreement that the in-principle measure proposed for the HHW SAC would provide suitable compensation to ensure coherence of the Natura 2000 network. In the event that compensatory measures are required, further details in relation to delivery of this measure would be progressed post consent as part of development</p>



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	<p>1.28 Norfolk Boreas has discussed a number of compensatory measures with Natural England. Given that the key issue for Annex I Sandbanks and Reefs at HHW SAC, based on our understanding of site condition, is lasting change of habitat, Natural England are keen that measures focussing on ensuring no loss of designated features are taken forward.</p> <p>1.29 Ultimately Norfolk Boreas has decided to propose an extension to the boundary of HHW SAC to incorporate an area where there is suitable confidence, based on best available evidence, in the presence of Annex I Sandbanks and Reefs. The Applicant is proposing a 1:10 compensation ratio to allow for any uncertainties in deliverability.</p> <p>1.30 Natural England agrees that an extension to the HHW SAC site boundary would be the most environmentally beneficial measure to deliver compensation for both Annex 1 Sandbanks and Reefs habitat and ensure coherence of the Natura 2000 network.</p> <p>1.31 Whilst Natural England consider, on ecological grounds, that this measure has the potential to compensate for Annex 1 Sandbanks and Reefs habitat in HHW SAC, more detail is required regarding how this would be delivered. We acknowledge there are likely to be practical challenges and potential policy issues in securing this compensation measure as well as any required additional site management measures. Therefore, consultation with Defra, other regulators (such as MMO and Eastern Inshore Fisheries and Conservation Authority) and key stakeholders is required.</p>	<p>of the scheme to be submitted for the Secretary of State's approval (in consultation with Natural England and the MMO).</p>
19	<p>Compensatory measures</p> <p>1.27 As stated above (Section 1.1), under Article 6(4) of the Habitats Directive, the project may be permitted if the Secretary of State is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest.</p> <p>1.28 Norfolk Boreas has discussed a number of compensatory measures with Natural England. Given that the key issue for Annex I Sandbanks and Reefs at HHW SAC, based on our understanding of site condition, is lasting change of habitat, Natural England are keen that measures focussing on ensuring no loss of designated features are taken forward.</p> <p>1.29 Ultimately Norfolk Boreas has decided to propose an extension to the boundary of HHW SAC to incorporate an area where there is suitable confidence, based on best available evidence, in the presence of Annex I</p>	<p>The Applicant welcomes Natural England's agreement that the in-principle measure proposed for the HHW SAC would provide suitable compensation to ensure coherence of the Natura 2000 network. In the event that compensatory measures are required, further details in relation to delivery of this measure would be progressed post consent as part of development of the scheme to be submitted for the Secretary of State's approval (in consultation with Natural England and the MMO).</p>

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	<p>Sandbanks and Reefs. The Applicant is proposing a 1:10 compensation ratio to allow for any uncertainties in deliverability.</p> <p>1.30 Natural England agrees that an extension to the HHW SAC site boundary would be the most environmentally beneficial measure to deliver compensation for both Annex 1 Sandbanks and Reefs habitat and ensure coherence of the Natura 2000 network.</p> <p>1.31 Whilst Natural England consider, on ecological grounds, that this measure has the potential to compensate for Annex 1 Sandbanks and Reefs habitat in HHW SAC, more detail is required regarding how this would be delivered. We acknowledge there are likely to be practical challenges and potential policy issues in securing this compensation measure as well as any required additional site management measures. Therefore, consultation with Defra, other regulators (such as MMO and Eastern Inshore Fisheries and Conservation Authority) and key stakeholders is required.</p>	
<b>Special Protection Areas (SPAs)</b>		
20	<p>1.32 A number of protected sites and species were identified by Natural England as being at risk of significant impact from this development alone or in-combination, including kittiwake, gannet, guillemot, razorbill and seabird assemblage from Flamborough and Filey Coast (FFC) Special Protection Area (SPA) and lesser black-backed gull (LBBG) from Alde-Ore Estuary SPA. However, measures discussed here are specifically focussed on kittiwake at FFC SPA and LBBG at Alde-Ore Estuary SPA.</p>	<p><del>The Applicant has focussed on the potential in-combination effects where Natural England has stated that, irrespective of the inclusion of the uncertain impacts from the Hornsea Project Three and Hornsea Project Four wind farms, it considers that an AEoI cannot be ruled out, namely kittiwake from the FFC SPA and lesser black-backed gull from the AOE SPA. These were also the features for which</del> The Applicant notes Natural England's advice on these aspects, however the Applicant also considers it is important to clarify that for gannet, guillemot, razorbill and the seabird assemblage features of the FFC SPA Natural England has ruled out in-combination AEoI when Hornsea Projects Three and Four are omitted from the totals (but has been unable to with these included due to the uncertainty these projects introduce into the assessment; REP7-047). Thus, kittiwake is the only species, from this SPA, for which Natural England has been unable to rule out an AEoI both with and without the inclusion of Hornsea Projects Three and Four.</p>
21	<p><b>Current Position - Kittiwake at Flamborough and Filey Coast SPA</b></p> <p>1.33 Natural England advise that it cannot be certain that there will be no adverse effects on the integrity of FCC SPA through impacts to the features</p>	<p>The Applicant notes that Natural England has apparently changed its position with respect to the conclusion on in-combination AEoI, from 'it is</p>



Row no.	Summary of Submission	Applicant's Comments
	<p>of kittiwake, gannet, guillemot, razorbill, and seabird assemblage, in-combination with other plans and/or projects.</p> <p>1.34 Further to this, Natural England highlights that the in-combination total of collision mortality across consented plans/projects has already exceeded levels which are considered to be of an Adverse Effect on Integrity to kittiwake at FFC SPA, and that any additional mortality arising from these proposals would therefore be considered adverse.</p> <p>1.35 We also highlight that the possibilities for mitigation / compensation, and the confidence in any related advice, has been reduced by the (as yet undetermined) Hornsea Project Three application.</p>	<p>not possible to rule out an in-combination AEol' [REP7-047] to 'consider there to be an AEol' in their deadline 9 submissions.</p> <p>The Applicant strongly disagrees with this apparent change in position which has been made at a very late stage in the Norfolk Boreas examination and is contrary to Natural England's consistent advice of "it is not possible to rule out" which was their stated position since 2016 with respect to the in-combination kittiwake assessments for East Anglia THREE, Hornsea Project Two, Thanet Extension, Norfolk Vanguard and Norfolk Boreas (the latter until deadline 7; REP7-047). It is apparent that this apparent change in position has not occurred due to any new additions to wind farm mortality and the Applicant has not been provided with any new information from Natural England. Therefore, the Applicant is not aware of any new evidence which could justify the basis for this change in position. Furthermore, the most recent wind farms in the assessment (Norfolk Boreas, Norfolk Vanguard and Hornsea Project Three) have all recently committed to mitigations which substantially reduce collision risks (e.g. by up to 70% in the case of Norfolk Boreas) and Natural England has recently acknowledged the availability of headroom, which adds further precaution to their assessment. Given this, the Applicant can see no rational basis for Natural England's sudden apparent change in position.</p> <p>The Applicant notes Natural England's comment with respect to the undetermined Hornsea Project Three, but considers that this should have no bearing on the Norfolk Boreas application.</p>
22	<p><b>Current Position - Lesser black-backed gull at Alde-Ore Estuary SPA</b></p> <p>1.36 Natural England have advised [D9] that it could not be certain that there will be no adverse effects on the integrity of Alde-Ore Estuary SPA through impacts to LBBG, in-combination with other plans and/or projects.</p>	<p>The Applicant acknowledges Natural England's position on this matter, but also notes that the contribution to the in-combination total from Norfolk Boreas is a maximum of 2.1 birds per year (using Natural England's preferred methods) or 1.6 (using the Applicant's preferred methods). Natural England has confirmed that they do not consider this level of impact to result in an AEol for the project alone and that this is also a small contribution to the in-combination total [REP9-045]. Furthermore, the</p>

Row no.	Summary of Submission	Applicant's Comments
		<p>Galloper offshore wind farm was consented on the basis of project alone collision risk for this population estimated by Natural England at that time to be 119, and in-combination risk of 270-357, which is clearly considerably much higher than either the project alone (2.1) or in-combination (54) for Norfolk Boreas.</p>
23	<p><b>Additional Evidence Provided by the Applicant [D7-8]</b></p> <p>1.37 The project carried out updated Collision Risk Modelling (CRM) to take account of the mitigation measures proposed in terms of reduced numbers of turbines and raised minimum draught heights. Natural England agrees with the revised CRM figures calculated by the Applicant for the project for both kittiwakes from the FFC SPA and for LBBGs from the Alde-Ore Estuary SPA. We welcome the reductions in the collision risk predictions, and confirm that we again conclude that adverse effect on integrity can be ruled out for both kittiwake at the FFC SPA and LBBG at the Alde-Ore Estuary SPA from Norfolk Boreas alone. Whilst it is recognised that the Projects contributions to the in-combination mortality totals is small, when compared to other projects; Natural England again advises that it is not possible to rule out an adverse effect on integrity for kittiwake at FFC SPA and LBBG at Alde-Ore Estuary SPA from in-combination collision impacts with other plans and projects. For kittiwake at the FFC SPA we consider that mortality levels have exceeded those that would result in an adverse effect.</p> <p>1.38 The project has also carried out calculations to demonstrate where there is headroom in the in-combination assessment from the as built projects when compared against projects as consented. Natural England acknowledges the work that the Applicant has done to consider potential headroom in the in-combination/cumulative collision risk figures by assessing the 'as built' rather than the worst case scenario (WCS). However, whilst Natural England agrees that there is likely to be some headroom, the extent of any potential headroom is not agreed. In addition, it is important to note that there is not yet an agreed way forward to calculate headroom and the approach undertaken by the Applicant has not been subjected to wider scrutiny and approval.</p>	<p>The Applicant welcomes Natural England's agreement that the proposed mitigation has greatly reduced predicted collision risks for the project and that the contribution to the in-combination total is small compared with that from other projects. However, as noted above, the Applicant strongly disagrees with Natural England's apparent change in position on kittiwake and the basis for the change from 'cannot rule out an AEol' to there 'will be an AEol' for in-combination effects.</p> <p>The Applicant welcomes Natural England's agreement that there is likely to be some headroom in the cumulative and in-combination totals and has provided responses to Natural England's comments on headroom as follows:</p> <ul style="list-style-type: none"> <li>• REP9-041 in Table 1.11</li> <li>• REP9-042 in Table 1.12</li> </ul> <p>To avoid repetition these responses are not repeated here.</p>
24	Mitigation Proposed by the Applicant	<p>The Applicant welcomes Natural England's support for the mitigation measures committed to by the Applicant and the acknowledgement of the</p>

Row no.	Summary of Submission	Applicant's Comments
	<p>1.39 The Applicant has committed to a number of mitigation measures that Natural England welcome, including further reduction in turbine numbers, and further raising minimum draught height of turbines.</p> <p>1.40 We welcome the Project's engagement with the supply chain for both turbine manufacturers and construction vessels regarding constraints around draught height increases and turbine installation. We consider that the Applicant has made significant efforts to reduce the impacts of their proposal and demonstrated due consideration to ensure that all proposed mitigation measures are feasible. These reductions will result in a proportional reduction in the impact to birds.</p> <p>1.41 Natural England welcomes the further clarity provided on how the proposed additional mitigation will be secured and that the proposed change to project parameters and methodologies have been fully secured within the DCO/dML where appropriate. We also note that a 'Schedule of Mitigation' has been provided and agreed, which clearly sets out all of the mitigation measures.</p> <p>1.42 However, it should be noted that the measures are unlikely to fully exclude collision impact, so in combination considerations remain relevant. Because of this, Natural England's advice on adverse effects on site integrity remains unchanged.</p>	<p>efforts to which the Applicant has gone to explore, and subsequently commit to, options for impact mitigation. However, the Applicant notes that actually Natural England's position on in-combination kittiwake at FFC SPA has apparently changed from "can't rule out an AEol" (up to Deadline 7) to "consider there to be an AEol" ( at Deadline 9). Therefore, Natural England's advice has not remained unchanged. Furthermore, Natural England's apparent change in position is that collision impacts had reached this level (that 'there will be' an AEol) even before the inclusion of Hornsea Project Three and Norfolk Vanguard, notwithstanding that this was not the advice provided by Natural England at that time. No justification or evidence has been provided to the Applicant for this apparent change in position, and the Applicant can see no rational basis for this given that the most recent wind farms in the assessment (Norfolk Boreas, Norfolk Vanguard and Hornsea Project Three) have all recently committed to mitigations which substantially reduce collision risks (e.g. by up to 70% in the case of Norfolk Boreas) and Natural England has recently acknowledged the availability of headroom, which adds further precaution to their assessment.</p>
25	<p>Additional Measures that could Avoid/Reduce/Mitigate impacts</p> <p>1.43 Natural England consider that the Applicant has taken all reasonable steps to avoid, reduce and mitigate the impacts of the proposed development on both kittiwakes at FFC SPA and LBBG at Alde-Ore Estuary SPA.</p>	<p>The Applicant welcomes Natural England's support for the mitigation proposed, and acknowledgement that the Applicant has taken all reasonable steps to avoid, reduce and mitigate collision risks.</p>
26	<p>Compensatory measures - Kittiwake at Flamborough and Filey Coast SPA</p> <p>1.44 Please see section 1.1 for information regarding implementation of Article 6(4) of the Habitats Directive.</p> <p>1.45 Norfolk Boreas has discussed a number of compensatory measures with Natural England. Given that the key issue for kittiwake at FFC SPA, based on our understanding of site condition, is decreased productivity, Natural England are keen that measures focussing on increasing productivity, such as prey availability, are taken forward.</p> <p>1.46 However, Norfolk Boreas has decided that construction of artificial nests in the southern North sea / south-east England, but located outside of</p>	<p>The Applicant welcomes Natural England's comments on the proposed compensation options. The Applicant agrees that fisheries management has the potential to deliver greater compensation, however such management is not within the Applicant's power since it requires government intervention. In contrast the proposal to provide additional nesting habitat represents a measure which the Applicant can have high confidence in being able to deliver. The Applicant agrees that detailed planning and further consultation with Natural England would be undertaken post-consent if these measures are required by the Secretary of State (as secured</p>

Row no.	Summary of Submission	Applicant's Comments
	<p>the FFC SPA kittiwake population would provide the most confidence in deliverability.</p> <p>1.47 Though this isn't Natural England's preferred option, we agree that in-principle, the provision of additional nest sites for kittiwakes in the southern North Sea / south-east of England might have the potential to be of benefit to the regional kittiwake population and hence in our view, would ensure coherence of the Natura 2000 network (N2K), particularly if considered as a phased approach that also includes more medium term measures on prey availability.</p> <p>1.48 Whilst this measure would not directly benefit the FFC SPA population, we do recognise that it could be considered as a measure to ensure the coherence of the N2K network for kittiwake.</p> <p>1.49 We do advise however, that greater confidence is needed:</p> <p>1.50 a. That there would be a net benefit to the overall kittiwake population size (not just simply causing a redistribution); and</p> <p>1.51 b. That there are sufficient food resources within likely foraging range around any new location to support the required level of productivity.</p> <p>1.52 Whilst Natural England consider this measure has the potential to compensate for kittiwake at FFC SPA, more detail is required regarding the size and productivity of any new colony, the location and type of any new structure, the size of new structure, how the project intends to quantify the success of the measure, and the distance of the measure from the FFC SPA population.</p> <p>1.53 It should also be noted that depending on the chosen location there may also be an increased collision risk that would need to be taken account of when determining the productivity of any new colony.</p>	<p>in the dDCO by the requirement for submission of a detailed scheme for the Secretary of State's approval). This would include consideration and analysis to help inform the appropriate scale of compensation required (i.e. the size of artificial colony) and a review of fishery data to understand the prey resource to assist in site selection as well as options for monitoring in order to ensure the measures deliver the required levels of compensation required, including allowance for any over-compensation deemed necessary by the Secretary of State.</p>
27	<p>Compensatory measures - Lesser black-backed gull at Alde-Ore Estuary SPA</p> <p>1.54 Please see section 1.1 for information regarding Article 6(4) of the Habitats Directive.</p> <p>1.55 The Applicant has discussed a number of compensatory measures with Natural England. Given that the key issue for LBBG at Alde-Ore Estuary SPA, based on our understanding of site condition, is decreased productivity, Natural England are keen that measures focussing on increasing productivity, such as predator control, are taken forward.</p>	<p>The Applicant welcomes Natural England's comments on the proposed compensation. The Applicant agrees that improving lesser black-backed gull productivity, likely through reduced predation, would be the most effective compensation. However, following discussions with a range of relevant stakeholders the Applicant became aware that there were different opinions on what the best options would be. Consequently, the Applicant considered that the best approach would be to provide funding for a facilitator tasked with seeking a consensus on the most appropriate</p>

Row no.	Summary of Submission	Applicant's Comments
	<p>1.56 Ultimately the project has decided that funding a coordinator, whose role would be to facilitate the organisation of a stakeholder working group tasked with overseeing a review of the population's health, factors which have contributed to the decline, and proposals for conservation measures, would be their preferred compensation option. Depending on the outcome of this review, a trial may be undertaken to test options, before a final measure (or suite of measures) is taken forward for implementation, which could include predator control at nesting sites.</p> <p>1.57 Natural England's view is that whilst the funding of a project coordinator and scoping study is helpful, there must be a commitment to delivering measures on the ground that would offset the predicted collision risk mortality.</p> <p>1.58 Site management measures should be already happening within the designated site. The Section 106 agreement which was secured to address the impacts from the Galloper offshore windfarm to the LBBG population by facilitating changes to site management measures for the benefit of LBBG is still in the scoping phase of options which is effectively undertaking the same role as the Applicant's scoping study. Therefore, for Norfolk Boreas' proposals to demonstrate that they would have any added benefit beyond the S106 agreement, the outcomes of the S106 need to be determined first. Any compensation measure proposed by the Applicant would also need to be kept separate to the S106 to clearly demonstrate deliverables from the two projects.</p> <p>1.59 Therefore, whilst we recognise the benefit of the Applicant's proposal in helping to identify possible compensation measures; we do not feel it will achieve the desired outcomes without further specification of how Norfolk Boreas will compensate for reduced productivity of the LBBG population as a result of their project.</p> <p>1.60 Natural England agrees with the Applicant that mammalian predator control is the most suitable compensation measure and we believe that this could be achieved through partnership working with local land owners in the wider Alde-Ore. Therefore we feel that further detail on this measure needs to be clarified and conformation that delivery of the measure can be assured.</p>	<p>compensation options. However, it is important to note that funding of this post is not an alternative to funding for the measures thus identified, but in addition to this (although noting that this would also need to take into account the project's contribution to the total predicted impact).</p> <p>The Applicant also notes that, as far as the Applicant is able to determine, the Galloper S106 agreement has thus far failed to deliver any measures for this population, and this was part of the determination that a facilitating role would be an important step. The Applicant also agrees that detailed planning and further consultation with Natural England would be undertaken post consent if these measures are required by the Secretary of State (as secured in the dDCO by the requirement to submit a detailed scheme for the Secretary of State's approval).</p>

Row no.	Summary of Submission	Applicant's Comments
28	<p>Additional Considerations - Kittiwake at Flamborough and Filey Coast SPA 1.61 The approach and draft conditions are limited to construction of artificial nest sites, as the Applicant considers this to be the most appropriate measure to deliver compensation prior to the construction of Norfolk Boreas. Natural England welcome the additional effort the Applicant has gone to in order to present a broad range of compensation measures and would recommend other measures, for example sandeel fisheries management would be more likely to directly benefit the FFC SPA population.</p>	<p>The Applicant has undertaken a detailed review of potential compensatory measures, in consultation with Natural England, as presented in [REP-025], [REP-026]and [REP-027]. This concludes which compensatory measures are feasible and deliverable within the timescales relevant for the project. It is on this basis that precise compensatory measures have been proposed, with certainty that they can be delivered in appropriate timescales. It is not appropriate to include a range of options given that the Applicant has concluded that the other measures considered are not deliverable or would not achieve the desired outcomes. However, to the extent that monitoring of the measures concluded that they were not effective, the Applicant would not be precluded from taking forward other measures to address this at that stage.</p>
29	<p>Additional Considerations - Lesser black-backed gull at Alde-Ore Estuary SPA 1.62 The approach and draft conditions are limited to providing a 'facilitator' role for site management measures, as the Applicant considers this to be the most appropriate measure to deliver compensation prior to the construction of Norfolk Boreas. Natural England welcome the additional effort the Applicant has gone to in order to present a broad range of compensation measures and would recommend other measures, for example direct delivery of predator control measures, would be more likely to directly benefit the Alde-Ore Estuary SPA population.</p>	<p>Please see response to Natural England's point made in paragraphs 1.54 to 1.60 under the section 'Compensatory measures - Lesser black-backed gull at Alde-Ore Estuary SPA'.</p>
30	<p>Additional Considerations - Lesser black-backed gull at Alde-Ore Estuary SPA 1.62 The approach and draft conditions are limited to providing a 'facilitator' role for site management measures, as the Applicant considers this to be the most appropriate measure to deliver compensation prior to the construction of Norfolk Boreas. Natural England welcome the additional effort the Applicant has gone to in order to present a broad range of compensation measures and would recommend other measures, for example direct delivery of predator control measures, would be more likely to directly benefit the Alde-Ore Estuary SPA population.</p>	<p>Please see response to Natural England's point made in paragraphs 1.54 to 1.60 under the section 'Compensatory measures - Lesser black-backed gull at Alde-Ore Estuary SPA'.</p>



Row no.	Summary of Submission	Applicant's Comments
<b>Overarching Comments</b>		
31	<p>Consenting considerations</p> <p>a) Decommissioning feasibility</p> <p>1.63 One of the key issues for impacts to Haisborough Hammond and Winterton SAC is the impact of cable protection on Annex I Sandbanks and Reefs. The Applicant has determined this to be of a 'long-term temporary impact' due to their commitment to removal of any cable protection at decommissioning. Natural England notes that successful removal of cable protection has not yet been adequately demonstrated, or if removal after 30+ years would assure the recovery of the site to pre-impact levels or indeed result in a greater overall impact to the site due to adaptation of habitats to the cable protection.</p>	<p>Following the Applicant's commitment to no rock or gravel dumping within the HHW SAC (see row 5 in section 1.9) Natural England have agreed that Applicant has demonstrated that cable protection would be decommissioned and therefore that impacts can be considered long-term temporary.</p>
32	<p>b) Securing mitigations</p> <p>1.64 All mitigations proposed by the Applicant have been secured in the DCO/DMLs (although some comment has been raised on how this mitigation has been secured see our D9 DCO submission for comments on the DCO), which Natural England welcome as this is necessary to ensure they are carried out sufficiently or alternatives pursued should they not be successful. This mitigation also required agreeing an In-Principle Monitoring Plan that will clearly define the monitoring requirements and the rationale behind them, for all receptors likely to be impacted by the development. This monitoring will confirm the efficacy of the mitigation and highlight if there is a need for any further mitigation.</p>	<p>The Applicant notes this and welcomes Natural England's agreement that all mitigation is appropriately secured in the dDCO and will be appropriately monitored through the IPMP. The Applicant's response to Natural England's comments on the dDCO are addressed above in section 1.8.</p>

## 1.16 REP9-047 Comments on Norfolk Boreas In Principle Habitats Regulations Derogation, Provision of Evidence - Appendix 1 Flamborough and Filey Coast SPA In Principle Compensation

Summary of Submission	Applicant's Comments
<p>1.1. Natural England welcomes the in principle compensation measures presented by Norfolk Boreas for kittiwakes at the Flamborough and Filey Coast (FFC) SPA. We believe that these proposals are in principle heading in the right direction in relation</p>	<p>The Applicant welcomes Natural England's supportive and constructive comments on the in-principle compensation measures presented.</p>

Summary of Submission	Applicant's Comments
<p>to addressing the ecological impacts. Although, we note that the compensation measure mostly likely to increase the FFC SPA productivity i.e. fisheries management measures has not been taken forward by Norfolk Boreas in the proposed approach to delivery and draft conditions to secure the compensation; with the Applicant in favour of providing nesting ledge provision for kittiwakes. Please be advised that we still have significant concerns in relation to the evidence base for this proposal, which requires much greater analysis, and implementation/legal issues to fully understand and address before this can be considered an appropriate compensatory measure to address collision mortality impacts.</p> <p>1.2. Natural England does not consider it appropriate to restrict the potential compensation for kittiwakes at the FFC SPA to just the option of provision of artificial nesting sites at this this time. Therefore, we would recommend that alternative draft conditions are produced which allow for a range of compensatory measures (e.g. to also include fisheries management). This would allow the Secretary of State (SoS) to consider the appropriateness of a range of potential compensatory measures.</p>	<p>The Applicant agrees with Natural England that reduced fishery pressure has the greatest potential to improve the status of the SPA kittiwake population. However, as noted by Natural England (paragraph 4.11 of REP9-047) such measures are not in the Applicant's power to deliver, and hence while the Applicant has given consideration to this, and other measures, the focus was on options which were considered feasible, under the Applicant's control and predicted to have a high probability of success, which in this case was deemed to be provision of additional nesting habitat.</p> <p>Should the Secretary of State require the Applicant to provide compensation for the project's kittiwake collision risks then the Applicant will seek to engage fully with Natural England post consent in order to agree and refine the proposals to achieve the required levels of compensation.</p> <p>With respect to consideration of other options, please refer to the response to this point in Tables 1.8 and 1.15 above.</p>

### 1.17 REP9-047 Comments on Norfolk Boreas In Principle Habitats Regulations Derogation, Provision of Evidence - Appendix 2 Alde-Ore Estuary SPA In Principle Compensation Measures

Summary of Submission	Applicant's Comments
<p>1.1. Natural England welcomes the in principle compensation measures presented by Norfolk Boreas for lesser black-backed gulls (LBBGs) at the Alde-Ore Estuary SPA. We believe that these proposals are in principle heading in the right direction. But, Natural England's view is whilst the Applicant's proposal to fund of a project coordinator and scoping study is helpful, there must be a commitment to delivering measures on the ground that would offset the predicted collision risk mortality.</p> <p>1.2. Therefore, we have reviewed all of the options considered by the Applicant as compensation measures and we believe that predator proof fencing for LBBG at the</p>	<p>The Applicant welcomes Natural England's supportive and constructive comments on the in-principle compensation measures presented.</p> <p>The Applicant also agrees that predator proof fencing is likely to be the most effective compensation option. However, given the history of proposed interventions at the SPA (e.g. the Galloper S106 agreement), the Applicant considered that there was a risk that simply offering to provide funding for a fence would not achieve the desired outcome. Furthermore, following discussions with stakeholders it was apparent to the Applicant that there were</p>



Summary of Submission	Applicant's Comments
<p>Alde-Ore Estuary SPA has the most potential to be considered as an appropriate compensatory measure to address collision mortality impacts. However, there are other factors, including site suitability and management issues, which need to be considered in determining a suitable location for such fencing.</p> <p>1.3. Natural England considers that it is achievable to have a suitable location identified and a predator proof fence erected before the construction of the windfarm.</p>	<p>different opinions on what the best option would be. Thus, the proposed project coordinator's role would be to ensure agreement on the best options and cross-stakeholder support. It is important to stress that this would be in addition to a proportionate contribution from the Applicant to the agreed compensation.</p> <p>Should the Secretary of State require the Applicant to provide compensation for the project's lesser black-back gull collision risks then the Applicant will seek to engage fully with Natural England post consent in order to agree and refine the proposals to achieve the required levels of compensation.</p>

### 1.18 REP9-048 Natural England's comments on In Principle Habitats Regulations Derogation, Provision of Evidence - Appendix 3 Haisborough, Hammond and Winterton SAC

Summary of Submission	Applicant's Comments
<p>Natural England welcomes the thorough consideration of the potential compensation measures and believes that the proposed extension to Haisborough Hammond and Winterton Special Area of Conservation (HHW SAC) would provide suitable compensation, from an environmental perspective, if considered necessary.</p>	<p>The Applicant welcomes Natural England's agreement that the proposed extension to HHW SAC would provide suitable compensation, from an environmental perspective, if considered necessary.</p>
<p>Natural England notes that the document referenced is reliant on information from the time of designation and does not fully take into account current condition assessments and proposed site management measures.</p> <p>Please see Natural England's comments provided at Deadline 5 for further advice on this [REP5 – 078]: <a href="https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001745-DL5%20-%20natural%20England%20-%20Response%20to%20the%20Applicant's%20Summary%20of%20Oral%20Representations%20at%20ISH%204%20-%20Agenda%20Item%206a(i).pdf">https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001745-DL5%20-%20natural%20England%20-%20Response%20to%20the%20Applicant's%20Summary%20of%20Oral%20Representations%20at%20ISH%204%20-%20Agenda%20Item%206a(i).pdf</a></p>	<p>Tables 2.1 and 2.2 of the Applicant's In Principle Habitats Regulations Derogation, Provision of Evidence; Appendix 3 HHW SAC In Principle Compensation (REP7-027) provides Natural England's latest published Supplementary Advice Targets for Annex 1 Reef and Annex 1 Sandbank in the HHW SAC. These targets focus on restoration of the Annex 1 features, taking into account the current unfavourable condition.</p>

Summary of Submission	Applicant's Comments
<p>Up to Page 11 there is information found on the conservation objectives for the site which is taken from Natural England's designated site view, which is welcomed by Natural England.</p>	<p>Noted.</p>
<p>Consideration of planting Native oyster: Natural England confirms that native oyster is not an Annex I habitat so therefore would not be beneficial to the N2K network. Should the planting of Native Oyster be an agreed measure then we agree with the Applicant that fisheries would need to be limited in the chosen area. Please note that if native oyster were to be planted around turbines outside of HHW SAC there would be no direct compensation for lasting changes to the habitat features of the SAC. In addition around turbines native oysters are likely to be impacted by operation and maintenance activities.</p>	<p>Through consultation with Natural England, the Applicant was aware of Natural England's position regarding this potential compensatory measure and this has informed the Applicant's proposed approach to delivery of compensation (if required) outlined in Section 4.3 of REP7-027, i.e. this potential measure has not been taken forward by the Applicant.</p>
<p>Consideration of extension to the HHW SAC: Natural England considers that an extension to the HHW SAC would be the most environmentally beneficial measure of those considered to deliver compensation for both Annex 1 Reef and Annex 1 Sandbank. We believe that the proposed measure has the potential to provide functions comparable to those that had justified the selection of the original site. We believe that whilst the designation process for the extension could be started immediately, (if resourced appropriately); it is unlikely to be in place prior to the start of construction. Natural England acknowledges that the Applicant has accepted to take into account the delayed delivery time by proposing a higher ratio of 1:10. It is also recognised by the Applicant that consultation with regulators such as EIFCA and Defra, SNCBs, and key stakeholders including other industries would be required. In addition management measures for other industries operating within the proposed extension area would need to be implemented if not already occurring.</p>	<p>The Applicant agrees that designation of an extension to SAC status is unlikely to be achieved prior to construction. However as discussed in Section 4.2.2.4 of REP7-027, if compensation is required the aim would be to designate the site extension to pSAC status prior to the construction of Norfolk Boreas. Recognising that DECC (2016) states that a notified pSAC should be treated as if it has been formally designated, pSAC status would deliver compensation. In order to reach pSAC status, the Applicant would support the development of an Area of Search in accordance with the JNCC Marine SAC Selection Process and Guidance. This may be undertaken either by the Applicant or by a third party (e.g. Natural England) with financial support from the Applicant. Consultation would be undertaken with relevant stakeholders during this process.</p>

Summary of Submission	Applicant's Comments
<p><b>Fisheries management:</b></p> <p>Natural England agrees with the Applicant that it would be difficult to determine appropriate methodologies for and the level thereof of intrusive fisheries practices that would need to be removed to offset the impacts and demonstrate the additive benefit. It is also reliant on buy-in from fishermen.</p> <p>Natural England notes that there is currently no authority with jurisdiction to deliver fisheries management areas as compensation. Therefore going forwards there would need to be greater engagement with the IFCA's and regulatory bodies.</p>	<p>Noted and agreed, as a result this potential measure has not been taken forward by the Applicant.</p>
<p><b>Removal of disused Anthropogenic structures and litter:</b></p> <p>Natural England believes that this option has the potential to deliver compensation from an environmental perspective so should not be discounted going forwards. However, at this time we agree with the Applicant that it is not clear how other industries such as oil and gas will decommission infrastructure and pipelines within the site and whether there are likely to be options to provide additive measures that could be considered as compensation by other industries.</p>	<p>Noted and agreed. The Applicant has proposed a compensatory measure which it considers to be deliverable at this time and as a result this potential measure has not been taken forward.</p>
<p>Natural England welcomes the inclusion of the table summarising the proposed compensation measures.</p>	<p>Noted.</p>

### 1.19 REP9-049 Natural England's Updated Offshore Ornithology Advice

Summary of Submission	Applicant's Comments
<p><b>3 Response to Natural England's Submission EV9-003 and Further Comments to REP4-040 [REP7-031]</b></p>	
<p><b>3.1 Increases in Draught Height</b></p> <p>We welcome the clarification provided by the Applicant in REP7-031 regarding the reference points used for sea level datum. It may well be the case that using highest astronomical tide (HAT), mean sea level (MSL), mean high water springs (MHWS) etc. as the reference point does not make a difference to the predicted collision figures, provided the datum used and the height difference between this and MSL are stated in order to ensure the correct tidal offset is applied in CRM, and that all heights in the calculations are based on MSL. However, we note that it can cause considerable confusion, and potentially causes a problem when others need to use the information at a later date and are unable to work out whether a measurement relates to HAT,</p>	<p>The Applicant welcomes Natural England's agreement that the collision risk modelling as presented in the Norfolk Boreas assessment has been undertaken correctly with respect to sea level datums.</p> <p>The Applicant also agrees that an industry standard would be helpful in this regard and suggests that Natural England should state what sea level datum should be used for future wind farm applications in their guidance.</p>

Summary of Submission	Applicant's Comments
<p>MSL, MHWS etc. It would be very helpful if the industry could agree a standardised method for use in all projects.</p>	
<p><b>4 Response to Natural England's REP7-045 and REP7-046 [REP8-016]</b></p>	
<p>4.2 Precaution in assessments</p> <p>As such, we are not requesting further discussion on the differences between the Option 1 and 2 outputs with the Applicant, but this lack of site-specific data and the need to collect data on accurate collisions are areas we suggest should be considered in any monitoring proposals should the Norfolk Boreas site be consented</p>	<p>The Applicant acknowledges Natural England's comment and considers it important to clarify that 'lack of site specific data' only refers to estimates of seabird flight height and that this was not a result of a failure to collect data but rather that following data collection the flight height estimates were identified (by the aerial survey contractor) as being unreliable and unsuitable for impact assessment purposes (as agreed with Natural England during the Evidence Plan process and explained in WQ1.8.6.2, REP2-021). Consequently it was agreed with Natural England that the assessment would use option 2 of the Band collision risk model, using the generic seabird flight height data produced by the British Trust for Ornithology for this purpose.</p> <p>The Applicant is in complete agreement with Natural England that this is an aspect which should be considered for monitoring of the wind farm, and furthermore the Applicant considers that all operational monitoring undertaken at offshore wind farms should aim to reduce uncertainties and improve future wind farm assessment.</p>
<p><b>5 Cumulative and In-combination Collision Risk Modelling [REP8-025/026]</b></p>	
<p>5.3 Updated kittiwake cumulative and FFC SPA in-combination collision figures</p> <p>We also welcome that in REP8-025/26 the Applicant has corrected the cumulative and in-combination totals for kittiwake for all projects excluding Hornsea 3. We agree with the updated figures and agree that this has not affected the totals for all projects and for all projects excluding both Hornsea 3 and Hornsea 4 and that these remain unchanged. Therefore, our advice remains that set out in REP7-047 and REP4-040, namely:</p>	<p>The Applicant acknowledges Natural England's agreement with the updated totals provided by the Applicant in [REP8-025/026].</p> <p>The Applicant notes that Natural England has apparently changed its position with respect to the conclusion on in-combination AEoI, from 'it is not possible to rule out an in-combination AEoI' [REP7-047] to 'consider there to be an AEoI' in their deadline 9 submissions.</p>

Summary of Submission	Applicant's Comments
<ul style="list-style-type: none"> <li>• EIA scale cumulative: we are unable to rule out a significant adverse impact on kittiwake from cumulative collision mortality at an EIA scale irrespective of whether the Hornsea 3 and Hornsea 4 projects are included in the cumulative totals or not.</li> <li>• HRA FFC SPA in-combination: as this feature has a restore conservation objective, and because there are indications that the predicted level of mortality would mean the population could decline from current levels should it currently be stable, it is considered that there is an AEoI of the kittiwake feature of the FFC SPA for collision impacts from in-combination with other plans and projects, both including and excluding Hornsea 3 and Hornsea 4.</li> </ul>	<p>The Applicant strongly disagrees with this apparent change in position which has been made at a very late stage in the Norfolk Boreas examination and is contrary to Natural England's consistent advice of "it is not possible to rule out" which was their stated position since 2016 with respect to the in-combination kittiwake assessments for East Anglia THREE, Hornsea Project Two, Thanet Extension, Norfolk Vanguard and Norfolk Boreas (the latter until deadline 7; REP7-047). It is apparent that this change in position has not occurred due to any new additions to wind farm mortality and the Applicant has not been provided with any new information from Natural England. Therefore the Applicant is not aware of any new evidence which could justify the basis for this change in position. Furthermore, the most recent wind farms in the assessment (Norfolk Boreas, Norfolk Vanguard and Hornsea Project Three) have all recently committed to mitigations which substantially reduce collision risks (e.g. by up to 70% in the case of Norfolk Boreas) and Natural England has recently acknowledged the availability of headroom, which adds further precaution to their assessment. Given this, the Applicant can see no rational basis for Natural England's sudden apparent change in position.</p>

## 1.20 REP9-052 RSPB Response to the Offshore Ornithological Assessment Updates (Project Alone and Project Cumulative & In combination Collision Risk Modelling) and Report on the Implications for Ecological Sites

Summary of Submission	Applicant's Comments
<b>2. Summary of the RSPB's position regarding adverse effects</b>	
<p>2.1 The RSPB welcomes the revisions to the turbine specification submitted at Deadline 5 and the subsequent re-calculations of mortality predictions arising from collisions through the project alone (Deadline 5) and in-combination (Deadline 6). Although the Applicant does not present these re-calculations in the</p>	<p>The Applicant notes the RSPB's position with respect to the reduced collision risks for the project alone and clarifies that the RSPB has agreed with the Applicant that no adverse effects on integrity (AEoI) could be concluded due to the project alone (ExA.SoCG-21.D10.V4). The Applicant acknowledges the RSPB's position with</p>

Summary of Submission	Applicant's Comments
<p>context of Population Viability Analysis (PVA), using the models previously submitted the RSPB has investigated the Counterfactuals of Population Size (CPS) for these revised estimates of mortality (Tables 1 &amp; 2 in Section 4 below). CPS is an output metric of PVA that shows the percentage difference between projected population sizes with and without the in-combination developments. It is the RSPB's preferred metric for reasons described below. These show that for in-combination collisions:</p> <ul style="list-style-type: none"> <li>• The Flamborough and Filey Coast SPA population of gannet will be greater than 48.5% lower after 30 years than it would have been in the absence of mortality arising from the in-combination developments including Hornsea Projects 3 and 4, or 46.7% lower excluding Hornsea projects, using the RSPB's preferred breeding season avoidance rate, or 37.1% and 32.7% lower, respectively, using the Applicant's preferred avoidance rate.</li> <li>• The Flamborough and Filey Coast SPA population of kittiwake will be 20.5% lower after 30 years than it would have been in the absence of mortality arising from the in-combination developments including Hornsea Projects 3 and 4, or 10.8% lower excluding Hornsea projects.</li> <li>• The Alde-Ore Estuary population of lesser black-backed gull will be 33.1% lower after 30 years than it would have been in the absence of mortality arising from the in-combination developments.</li> </ul> <p>2.2 Having reviewed these values our conclusions as to adverse effects on the integrity of the Flamborough and Filey Coast and the Alde-Ore Estuary SPAs are as follows.</p> <p>2.3 We conclude that adverse effects on site integrity of the Flamborough and Filey Coast SPA cannot be ruled out, with reference to the following SPA features:</p> <ul style="list-style-type: none"> <li>• Kittiwake, in-combination, regardless of whether Hornsea Project 3 and 4 are included or omitted;</li> <li>• Gannet, in-combination, regardless of whether Hornsea Project 3 and 4 are included or omitted;</li> </ul>	<p>respect to in-combination collisions, but does not agree that these will result in AEoI, for reasons set out in the Applicant's submissions [e.g. REP2-035, REP6-024].</p> <p>The RSPB notes that the Applicant did not re-run the PVA models following the presentation of the revised collision estimates. However, since the project alone collision estimates were reduced following mitigation, and the in-combination totals were also either reduced or remained the same (e.g. following a request to revise the figures used for other projects), it was not necessary to present these outputs again as the results were already included within the range previously presented in REP2-035.</p>

Summary of Submission	Applicant's Comments
<ul style="list-style-type: none"> <li>Seabird assemblage, in-combination, regardless of whether Hornsea Project 3 and 4 are included or omitted, based on combined impacts of kittiwake, gannet, guillemot and razorbill.</li> </ul>	
<b>3. Kittiwake flight speed</b>	
<p>3.1 The Applicant has produced a note on flight speeds for kittiwake (REP5-060). The RSPB welcomes the attempt to use evidence-based rates to parameterise the Collision Risk Models (CRMs), however there are severe limitations to the approach taken by the Applicant. Like all the biological parameters of the Band model there is not a single fixed correct value, rather a distribution of possible values, and there may be considerable uncertainty as to the nature of that distribution and its central tendency. In the case of flight speed, there is considerable variability due to behavioural state (for example, Fijn &amp; Gyimesi, (2018) demonstrated that foraging birds are likely to fly slower than commuting birds) and environmental conditions (for example, as intuitively makes sense, birds flying upwind are likely to fly slower than birds flying downwind, (Elliot et al., 2014)). Furthermore, behavioural state will interact with environmental conditions, for example, Lane et al., (2019) found that gannets spent more time actively foraging in stronger winds. As bird behaviour and wind conditions vary spatially the best approach to the use of flight speed in collision risk models would therefore be to collect site-specific data on speed in order to capture the behaviours and environmental conditions relevant to that site. In the absence of such data, the model has typically, and quite correctly, been used with precautionary values for flight speed. This is entirely appropriate, as the precautionary principle means that where there is uncertainty, including that arising from variability in input parameters, conservative values must be used (Kreibel et al., 2001).</p> <p>3.2 As part of the Offshore Renewables Joint Industry Partnership (ORJIP) Bird Collision Avoidance study, the flight speed of a small number of species of seabird were collected (Skov et al., 2018). These speeds were reviewed in the context of the Band CRM by Bowgen and Cook (2018). As well as highlighting the importance of using site-specific flight parameters, they suggested different measures of flight</p>	<p>The Applicant agrees that evidence based parameters are to be preferred in impact assessment modelling, such as the collision risk model, although it should be clarified that the Applicant has not used the revised collision estimates obtained with the lower flight speed identified in the review, but Natural England advised [REP7-048] that these could be presented alongside the existing estimates. The Applicant provided these [REP8-027] and notes that the collision estimates are approximately 10% lower, and this highlights that the current rate almost certainly leads to over-estimated collision risk predictions contributing to the precaution in the assessment.</p> <p>With respect to the RSPB's comments on the effects of tags on flight speed, it is important to stress that while the tags themselves may be streamlined as far as possible, even a streamlined tag will add drag to a flying bird, and this is currently unavoidable. Thus, even the best streamlined tags currently available will cause increased drag, and many studies have been conducted with larger (and therefore less streamlined) tags than are currently available. Thus, the Applicant considers the reservations about use of flight speeds from tag studies to be reasonable and proportionate.</p> <p>The Applicant also notes that the RSPB states that where there is uncertainty it is necessary to apply precaution. As with other arguments for precaution, this approach treats each individual element that contributes to the impact assessment independently and applies the precautionary principle, with the consequence that the overall outcome combines precaution from many sources and results in over-precaution.</p> <p>The Applicant does not disagree that undertaking detailed behavioural studies at a given site would provide high quality data for assessment, however the Applicant considers undertaking such detailed studies would be extremely challenging, particularly to achieve year round study without the risk of influencing the bird</p>



Summary of Submission	Applicant's Comments
<p>speed for the Band model, “true speed” and “straight-line speed”, and recommended the selective use of these at different stages of the Band model procedure. A more straightforward, and accurate, approach is the use of “instantaneous flight speed”, measured by GPS, as demonstrated by Fijn &amp; Gyimesi, (2018) using GPS tag data. This study showed significant differences in flight speeds, and subsequent collision mortality predictions, in relation to behaviour and again highlighted the importance of site-specific behaviour.</p> <p>3.3 In presenting their preferred flight speeds for kittiwake, the Applicant dismisses flight speeds derived from tagging studies by claiming that the tags used were not “streamlined” and that they caused behavioural anomalies by being too heavy in comparison with the bird’s body mass. The first of these points is factually incorrect, the second is a reiteration of an unsubstantiated claim made by the Applicant in earlier Application documents and in the Norfolk Vanguard Application (Vattenfall 2018).</p> <p>3.4 With regard to streamlining, the tags were not deployed in manufacturers housing in which they were supplied, but rather the internal mechanism of the tag was removed from the housing and rehoused in tubing. This tubing was heat shrunk at each end, to produce a very streamlined tag, tapering front and back. It is unclear why the Applicant made this assertion without first checking whether it was accurate.</p> <p>3.5 With regard to tag weight, a review of the unsubstantiated allegations regarding tag weight has been made in our previous submissions (REP2-096). Notwithstanding that review, the RSPB has carried out an extensive investigation of effects arising from the weight of tags on seabird behaviour, the results of which were inconclusive, as there were multiple factors that could have led to confounding results (Cleasby et al., 2019). This is because the projects investigated were not designed specifically to investigate tag effects and carefully considered experimental design is required to provide a more unequivocal analysis of tag effects. These results have been presented to the Applicant, and although they have not responded to that presentation, they continue to make allegations in non-peer reviewed reports regarding the veracity of tagging studies. It should be noted that these allegations have not affected the acceptance of results from</p>	<p>behaviour (e.g. from a vessel) and thus compromising the study. It is therefore entirely appropriate to undertake reviews of existing studies (as the Applicant has) and draw conclusions based on these data. Indeed, a review such as this can draw on considerably more data than it is probable that a site-specific study could achieve. Consequently such an approach is arguably considerably more robust and likely to capture the range of environmental conditions to be experienced.</p>



Summary of Submission	Applicant's Comments
<p>these tagging studies being accepted in the recent peer-reviewed literature (e.g. Cleasby et al., 2020), included in the recent Crown Estate funded review of foraging ranges (Woodward et al., 2019) which was overseen by a panel of experts, and indeed the Applicant's own experts have been co-authors of work that utilises these tagging studies (Searle et al., 2018).</p> <p>3.6 The Applicant's approach to setting a value for wind speed to input into the Band model is to simply take an average of the published ground speed values set out in Table 1.1 of their review (REP5-060), disregarding any reference to behaviour or environmental conditions. There is considerable variation in these values, ranging from 7.26 to 15.9 m/sec, and within the studies there is variability of between 4 and 17 m/sec. Much of this variability is likely to be due to behaviour and environmental conditions and so to be site-specific. As such, to simply take a mean without any attempt to determine the behaviours and conditions at the Application area and therefore consider what speed in this range the birds on the development site will be flying at is grossly over-simplistic and entirely inappropriate.</p> <p>3.7 A far better approach would be to obtain site-specific data on the speed that kittiwake, via tagging, laser-rangefinder or a radar/camera system as used in ORJIP and also recently at the European Offshore Wind Deployment Centre. In the absence of such data, a precautionary value must be set, and there is no evidence to suggest a change from the value advocated by Natural England. It should be noted that, from the Applicant's own review, the recommended value is lower than some reported in that review, therefore it is wholly incorrect to describe it, as the Applicant repeatedly does, as overly precautionary.</p>	
<p><b>4. Population Viability Analysis</b></p>	
<p>a) Counterfactual of Population Size and Growth Rate outputs</p> <p>4.2 The CPS is the ratio of the expected population size with the wind farm to that without it, as derived from Population Viability Models. To calculate it, a PVA is run predicting the size of the population in question in the absence of a wind farm and this is compared with the size of the population predicted if the additional mortality arising from the wind farm is included. The population sizes are</p>	<p>The Applicant agrees with the RSPB's description of the CPS. The RSPB state that the CPS will 'typically' show a smaller impacted population size than the unimpacted one. In fact this is the only possible outcome from such a simulation, since even a very small mortality impact will reduce the growth rate of the impacted population, resulting in a smaller final population size. Furthermore, because density independent populations grow exponentially, the difference</p>

Summary of Submission	Applicant's Comments
<p>compared after the life of the wind farm, typically 25 or 30 years. As there is additional mortality included in the model run including the wind farm, there is typically a decrease in the predicted population size compared with the predicted population size in the absence of the wind farm. We set this out in detail in our submission for Issue Specific Hearing 4 (AS-041).</p>	<p>between the final unimpacted and impacted populations can be extremely large, thus resulting in very large CPS values (i.e. suggesting a server impact on the population). However, this is strongly influenced by the assumption of density independence and in many cases, both impacted and unimpacted populations grow in size considerably over the course of the simulation period albeit, due to the compound nature of population growth, reaching different sizes.</p> <p>For these reasons the Applicant considers that the counterfactual of population growth rate (CGR) is a more reliable metric from a density independent simulation.</p>
<p>4.3 In order to reach their conclusions, the Applicant sets the Counterfactual of Growth Rate output metric against the recent SPA colony growth rate. This is a misapplication of this metric. A key justification of the use of counterfactual metrics (both population size and growth rate) is that they are not influenced by the uncertainty around future populations (Green et al., 201613). We have no robust predictive method that can account for potential changes in population demographic due to unforeseen or unpredictable events, for example, changes in discard policy or severe weather incidents. As the counterfactual approach is relatively insensitive to the assumptions made about the magnitude, variability and trends of demographic rates in the model from which it is calculated, because the same uncertainties apply to both the impacted and unimpacted scenarios, this is not a problem for the counterfactual approach. However, to compare the predicted change in population growth rate in 30 years' time against the current population growth rate does not account for the high probability that the future population growth rate will likely be considerably different from this and that if it were possible it would be this growth rate that should be compared to the predicted change in population growth rate. As it is impossible to determine what that growth rate will be we do not accept this as an adequate method for reaching conclusions of the significance of an effect.</p>	<p>THE RSPB is incorrect to state that the CGR the Applicant has used in the assessment is derived from the end of the simulation period (i.e. 30 years into the future). The growth rate for both the impacted and unimpacted populations is calculated over the period of the simulation (i.e. it is effectively a time averaged rate). The Applicant considers this to be more robust than the final population size CPS that the RSBP prefers, which suffers precisely from the flaw that the RSPB incorrectly attributes to the CGR, namely that it reflects a simulated snapshot 30 years into the future.</p> <p>The Applicant agrees that future population growth rates may not be comparable to those observed in recent years, however the Applicant still considers this approach is methodologically much more appropriate than that preferred by the RSPB which is based on the fundamental flaw of exponential, density independent population growth over a period of 30 years.</p> <p>Furthermore, it is important to note that the Applicant's method does not compare the observed recent growth rate to a prediction of what the actual future rate will be, but rather to how much the future rate might be reduced by in the presence of the impact. For example, if the PVA predicts a small reduction in the growth rate due to the impact, while the recent observed trend has been for a larger rate of growth, then it is reasonable to suggest that the degree of reduction will not result in a population decline.</p>
<p>b) Density dependence</p>	<p>The Applicant does not dispute that estimating density dependence in wild populations is extremely challenging, however this does not prevent its inclusion</p>

### Summary of Submission

4.5 As detailed in our Written Representations (REP2-096) and comments on the Offshore Ornithology Assessment update (AS-041), the RSPB does not accept the arguments for the use of PVA outputs incorporating compensatory density dependence. The reasons for this are outlined in Green et al., (2016) and the reviews by Cook and Robinson, (2015) and O'Brien et al., (2017), and are not that density dependence does not exist, but rather that we do not have the means to accurately quantify the strength and form of it in a biologically meaningful way in order to incorporate it into PVA. While we acknowledge that this phenomenon of density dependence is well established, there remains scant data to underpin the modelling of such processes, notably for seabirds, as this modelling requires detailed knowledge of demographic rates or population growth rate across a wide range of densities under otherwise comparable conditions for the species and population of interest.

4.6 In order to incorporate density dependence into a PVA, a mathematical function is usually added, which links the population size with a demographic rate or rates. Alternatively, density may be assumed to influence population growth rate through an unspecified demographic mechanism. This function will include a number of fixed parameters, which mathematically describe the relationship between population size and demographic rate or population growth rate. These parameters would ideally be estimated with high precision from demographic data from the population of interest.

4.7 The PVAs cited by the Applicant have used a Weibull mathematical function to describe the relationship between reproductive rate and population size. This function describes the strength and shape of density dependence acting on the modelled populations. This function has 3 parameters:  $\alpha$ ,  $\beta$ , and  $\max F$ . It is important to note that none of these values are presented with supporting empirical evidence. In support of their use of density dependent models (REP5-051), the Applicant cites their consultants earlier report (SOSS 04, 2012). The RSPB welcomes this citation, noting that it says “in the absence of compelling support for density dependence, the simpler modelling approach should be favoured”, and are in complete agreement with that approach, since as detailed above, there is

### Applicant's Comments

in PVA in order to understand how such population regulation is influenced by such factors. Furthermore, while the RSPB has focussed on this issue in the Applicant's assessments it is important to note that the Applicant has not actually relied on the results of density dependent PVA to reach conclusions of no significant impacts or AEoI. Indeed, the Applicant has based the assessment on the CGR from the density independent simulations.

Furthermore, while the Applicant acknowledges the arguments for and against density dependent PVA, and followed statutory advice on this matter in basing predictions on the density independent outputs, the RSPB appears unwilling to accept that there is merit in presenting outputs from both density dependent and density independent PVA. Such an approach provides a measure of uncertainty and also provides informative context for the RSPB's preferred density independent outputs. Since the latter will generate more precautionary results (for all the populations under consideration in the Norfolk Boreas assessment this will be the case since compensatory effects are only expected for much smaller population sizes), it is useful to understand by how much the outputs may be affected by the assumption of density independence (which both the RSPB and Natural England acknowledge does not reflect reality).

Summary of Submission	Applicant's Comments
<p>no supporting evidence for the parameters used to define the function to describe density dependence for kittiwakes.</p> <p>4.8 It is important to acknowledge that density dependence is not always compensatory, but can also be depensatory, slowing the rate of population growth at lower population densities. In other words, a population decline arising from an offshore wind farm could have larger consequences on the population than are predicted by the compensatory density dependent or even density independent models. Horswill and Robinson (2015) identified depensation occurring in three gull species (black-legged kittiwake, black-headed gull and herring gull) and it has been argued that depensatory density-dependence may be appropriate to explore in future adaptations of these models, particularly for kittiwake, due to severely reduced population sizes (Miller et al., 2019). As such, it is incorrect to argue that density independent outputs are highly precautionary.</p>	
<p>5. The RSPB's comments on the Report on the Implications for European Sites (RIES)</p>	
<p>The Applicant has provided their response to The RSPB's comments on the Report on the Implications for European Sites (RIES) in document ExA.RIES-R.D10.V1 The Applicant's Response to Comments on the Report on the Implications for European Sites (RIES)</p>	
<p>6. Concluding comments</p>	
<p>6.1 The RSPB welcomes the further mitigation measures proposed by the Applicant during the examination process and we have revised our position in light of the updated impact assessments based on the increased turbine draught height. It is with regret, however, that despite the predicted reductions in impacts to the SPA qualifying features, the scale of change predicted as a consequence of the Boreas development, in-combination with other projects, compared to unimpacted populations, remains such that the RSPB finds it impossible to conclude no adverse effect on integrity on the Flamborough and Filey Coast SPA and the Alde-Ore Estuary SPA as a result of collision mortality. We therefore welcome the Applicant's 'In Principle Habitats Regulations Derogation Provision of Evidence', submitted at Deadline 7, which we will provide comments on by Deadline 10.</p>	<p>The Applicant notes the RSPB's position, but disagrees with the conclusions reached on in-combination impacts for the reasons set out above and in previous submissions (e.g. REP2-035, REP5-059, REP6-024). The Applicant also looks forward to receiving the RSPB's comments on the Derogation submission [REP7-024].</p>

## 1.21 REP9-053 The Wildlife Trusts Response on Article 6(4) and Cabling Impacts

Summary of Submission	Applicant's Comments
<p>TWT has not engaged on the impacts of cabling on Haisborough, Hammond and Winterton SAC from Norfolk Boreas. However, the impact of cabling on Marine Protected Areas (MPAs) is a key concern for TWT, and as such, the Article 6(4) process is a priority area of TWT in relation to this impact.</p> <p>As a summary of TWTs broad views on the Article 6(4) process for cabling impacts on benthic habitats within MPAs:</p> <ul style="list-style-type: none"> <li>• TWT consider that alternatives are available which should be further investigated by developers.</li> <li>• TWT does not support rock protection in MPAs</li> <li>• Compensation should be assessed against site conservation objectives, conservation advice and the coherence of the UK MPA network. Advice is required to support this, and we recognise that the scope of this goes beyond the project.</li> <li>• Strategic measures need to be explored and developed to allow the scale of offshore wind farm development expected whilst maintaining the coherence of the UK MPA network. We also recognise that the scope of this goes beyond the project.</li> </ul>	<p>The Information to support Habitats Regulations Assessment (HRA) Report [APP-201] completed by the Applicant concluded that the project would have no AEoI on any European site. In the absence of any AEoI, it is the Applicant's view that a derogation case should not be required.</p> <p>However, notwithstanding this the Applicant was asked by the ExA in the second round of written questions to provide information on what alternatives were considered and what in principle compensatory measures could be applied. In response the Applicant submitted its Position Statement on Derogation at Deadline 6 [REP6-025]. In the Third round of written questions the Applicant was requested to provide further information on how the Applicant may consider a derogation case. In response the Applicant submitted its In Principle Habitats Regulations Derogation, Provision of Evidence documents [REP7-024 – REP7-028] at Deadline 7, March 2020.</p> <p>Responding to each of TWTs points in turn.</p> <ul style="list-style-type: none"> <li>• The Applicant has undertaken a full assessment of alternatives [REP7-024] and has concluded that there is no feasible alternative to routing the export cable through the HHW SAC. This view is supported by Natural England and the Crown Estate [REP9-045];</li> <li>• The Applicant has committed to decommissioning any cable protection placed within the HHW SAC to protect export cables not buried to an optimum depth. The Applicant has identified a number of potential options for cable protection [REP6-018], and concluded that rock dumping would not be a suitable option as it would not be possible to fully decommission. Therefore, the Applicant <u>would not</u> install rock dumping within the HHW SAC (this has been further confirmed with the inclusion of Condition 3(1)(g)(7) (see row 5 in section 1.9);</li> <li>• The Applicant would refer TWT to Appendix 3 of its in principle derogation case Haisborough, Hammond and Winterton SAC In Principle Compensation [REP7-027] in which it considers a number of different options that would compensate any potential effects which would hinder the conservation objectives of the HHW SAC. These potential compensatory</li> </ul>

Summary of Submission	Applicant's Comments
	<p>measures were identified in consultation with Natural England and the MMO [REP7-027];</p> <ul style="list-style-type: none"> <li>As outlined in [REP7-028] delivery of the compensatory measures has been considered for the project alone but also strategically with the Norfolk Vanguard project.</li> </ul> <p>The Applicant has committed to a number of mitigation measures that would address the potential effects of cable protection on the Haisborough, Hammond and Winterton (HHW) Special Area of Conservation (SAC). These are in addition to those against which the Applicant undertook assessment in the Information to Support HRA Report (document 5.3 [APP-201]) and therefore, with the additional mitigation measures, there can be further confidence that there would be no AEoI of the HHW SAC.</p> <p>Specific mitigation and the justification for it is described in the following documents:</p> <ul style="list-style-type: none"> <li>The Haisborough Hammond and Winterton Special Area of Conservation Position Paper [REP5-057];</li> <li>Additional information for the HHW SAC position paper [REP6-016];</li> <li>Haisborough Hammond and Winterton SAC control document (document 8.20) [REP6-011 or REP6-017].</li> </ul> <p>Therefore, the Applicant strongly maintains the position that derogation under Article 6(4) of the Habitats Regulations is not required for the Norfolk Boreas project.</p>
<p>TWT's detailed views can be viewed in the response to the further information requested by the Secretary of State for BEIS on the Article 6(4) process for Hornsea Three and Norfolk Vanguard.</p> <p>Key points raised in the responses to Norfolk Vanguard and Hornsea Three include:</p> <ul style="list-style-type: none"> <li>TWT welcome Norfolk Vanguard and Norfolk Boreas's commitment to HVDC technologies</li> <li>No cable protection within an MPA must be considered as a viable alternative</li> </ul>	<p>Responding to each of TWTs points in turn:</p> <ul style="list-style-type: none"> <li>This is welcomed. The Applicant has also made a number of other commitments detailed within the HHW SAC control documents (8.20) which further reduce any effects on the designated features from cable protection.</li> <li>This position is different from that of the second bullet in the row above as one only refers to rock protection (which has now been removed from the design envelope by the inclusion of Condition 3(1)(g)(7)) whereas the second refers to all cable protection. The applicant is engaging with Natural England and the MMO on the most appropriate method of cable protection</li> </ul>

Summary of Submission	Applicant's Comments
<ul style="list-style-type: none"> <li>TWT suggest that the Applicant should consider a shared cable route between Norfolk Vanguard and Norfolk Boreas, which are both owned by Vattenfall</li> <li>TWT encourage Applicant's to develop alternative solutions</li> </ul> <p>Further analysis on the effectiveness of compensation against Site Conservation Advice and Objectives is required, and TWT propose various compensation measures</p>	<p>to reduce effects as far as possible and significant progress has been made in this area.</p> <ul style="list-style-type: none"> <li>The Norfolk Boreas and Norfolk Vanguard projects have been developed strategically by Vattenfall Wind Power Ltd as the parent company and therefore do share an offshore cable corridor through the HHW SAC. The exact route of each export cable (up to two for each project) through the SAC will be carefully designed and strategically planned to minimise/avoid impacts on the features of the SAC. This may involve the diverging of the cables for example to route around a patch of Annex I <i>S.spinulosa</i> reef. In order to minimise environmental impact it is absolutely necessary that this flexibility to diverge routes (within the same cable corridor) is retained.</li> <li>The Applicant has reviewed many alternative solutions for the project [REP7-027] and continues to work with Natural England and the MMO to define which cable protection options would cause the least effect on the designated features of the HHW SAC.</li> </ul> <p>The Applicant has put forward suggested in-principle compensation measures, albeit this is without prejudice to the Applicant's firm position that no AEol can be concluded for the project alone and in-combination with other plans and projects.</p>

## 1.22 REP9-054 Colin Kings Deadline 9 submission

Summary of Submission	Applicant's Comments
<p>REP9-054 raises concerns over the effectiveness of the proposed mitigation and considers the onshore cable route site selection to be questionable.</p> <p>REP9-054 refers to the detrimental effect of the substation height as a result of the HVDC technology and refers to the use of bunding and reductions to the levels.</p>	<p>The Applicant refers to the response provided to ExA Q4. 9.6.7 [ExA.WQ-4.D10.V1] which states that the landscape mitigation measures, embedded in the indicative plans for the onshore project substation (APP-492, APP-495, APP-503, APP-508) are considered in the LVIA to be sufficient to mitigate potential landscape and visual impacts experienced in the local area (from the HVDC solution) and that during the development of the landscape management scheme, the use of bunding will be given further consideration as part of the overall detailed design.</p>



Summary of Submission	Applicant's Comments
	<p>Full details of the Site Selection undertaken is detailed in ES Chapter 4 Site Selection and Assessment of Alternatives [APP-217].</p> <p>The Applicant provided comments regarding the request for significant bunding and reduction to ground levels in the Applicant's Comments on Responses to Further Written Questions ExA Q2.5.2.2 [REP6-014] and on the effects of HVAC/HVDC in Comments on Deadline 8 submissions [REP9-012].</p>

### 1.23 REP9-055 Lucy Sheringham Deadline 9 submission

Summary of Submission	Applicant's Comments
<p><b>Impacts to Highways caused by the selected unsuitable site A47 – Necton to Fransham</b></p> <p>REP9-055 raises concerns over the use of the existing National Grid substation entrance and the use of the existing lay-by to access the onshore project substation.</p>	<p>The project accesses from the A47 have been given specific design consideration and have been developed in consultation with Highways England. The Outline Access Management Plan (Version 2, submitted at Deadline 9) provides details of the access arrangements proposed for the National Grid extension and the onshore project substation.</p> <p>The access to the National Grid substation extension (AC178) will be via the existing entrance with a number of improvements and the adoption of 'no right turn' traffic management. The Applicant notes the concerns regarding problems experienced during the construction of the Dudgeon substation. However, details of the use of this access, diversion routes and enforcement measures which will be in place to manage this access are detailed in the OTMP (Version 5, submitted at Deadline 10) including details on delivery route compliance, a co-ordination and corrective actions process, and a designated Norfolk Boreas Limited local community liaison officer will respond to any public concerns, queries or complaints.</p> <p>With regards to the use of the existing lay-by to access the onshore project substation this is incorrect. To access the onshore project substation the Applicant will be constructing a new access (AC180) in the form of a DMRB compliant right turn ghost island priority junction. Further details on the</p>



Summary of Submission	Applicant's Comments
	<p>proposed access are included in the OAMP, including general arrangement drawings in Appendix 2.</p> <p>These access arrangements are agreed with Highways England as detailed in the Statement of Common Ground [REP9-021].</p>
<p><b>Tree mitigation</b></p> <p>REP9-055 refers to the poor establishment of the Dudgeon mitigation planting and asks how Vattenfall will commit to fulfilling further mitigation issues when current trees are failing.</p>	<p>The Applicant refers to the response to Further Written Questions ExA Q2.9.7.1 [REP5-045] where it has responded on concerns regarding the limited growth on the existing mitigation planting.</p> <p>Requirement 19 of the draft DCO, secures the implementation and maintenance of the landscaping to ensure the effectiveness of the mitigation planting and states that:</p> <p><i>'Any other tree, hedge or shrub planted as part of an approved landscaping management scheme that, within a period of five years after planting, is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased must be replaced in the first available planting season with a specimen of the same species and size as that originally planted unless a different species is otherwise approved by the relevant planning authority.'</i></p> <p>Further details on the proposed landscaping, implementation and aftercare are detailed in the OLEMS (Version 5, submitted at Deadline 10), secured through Requirement 18 of the DCO.</p>

### 1.24 REP9-058 Natural England's Risk and Issues log

- The Applicant has reviewed Natural England's Risk and Issues log, but upon review feel that it is superseded by the Statements of Common Ground between the two parties which have been submitted at Deadline 10 [ExA.SoCG-17.D10.V4 and [ExA.SoCG-17a.D10.V4]. These represent both parties' final position rather than a document which is fully owned by one party.

## 1.25 REP9-059 North Norfolk District Council Response to the Examining Authority's Third Round of Written Questions REP7-072

Summary of Submission	Applicant's Comments
<p><u>Q3.5.3.3 – Requirement 15: Scenarios, stages and phases of authorised development onshore</u></p> <ol style="list-style-type: none"> <li>Comment on the Applicant's view that programmes for submission and timetables for discharge would be better dealt with in the PPA? [REP6-014, response to NNDC response to Q2.5.1.5]</li> <li>Are you still of the view that an indication of stage commencement and completions should be included in Requirement 15?</li> </ol> <p><u>North Norfolk District Council Response:</u></p> <ol style="list-style-type: none"> <li>NNDC notes the applicant's submission at REP6-04 in response to Q2.5.1.5. NNDC accepts that it may be challenging for the applicant to be able to set programmes for submission and timetables for discharge within Requirement 15 for a variety of reasons. The underlining purpose of the suggestion from NNDC was to help improve the requirement discharge process through better understanding of timescales and the ability to match resources where they are most needed. If this can be achieved via a PPA then this would be acceptable but, whilst there is the principle of a PPA, this is not secured as part of this DCO decision and is still subject to applicant and LPA agreements.</li> <li>NNDC are prepared to rely on the timing of the requirement discharge process through a PPA.</li> </ol>	<p>Noted and the Applicant will continue to discuss the PPA and the discharge process with the relevant planning authorities.</p>
<p><u>Q3.5.3.4 – Requirement 15: Scenarios, stages and phases of authorised development onshore</u></p> <p>Parties to submit any additional information to assist the ExA in reaching its recommendation to the SoS.</p> <p><u>North Norfolk District Council Response:</u></p> <p>Nothing further to add from NNDC to previous submissions</p>	<p>Noted.</p>
<p><u>Q3.5.3.8 – Requirement 16 (13): Trenchless installation techniques</u></p> <ol style="list-style-type: none"> <li>Provide any comments on the points above.</li> </ol>	<p>The Applicant welcomes NNDC's withdrawal of their request for a trenchless crossing at Church Road, Colby. The Applicant is committed to minimising</p>

Summary of Submission	Applicant's Comments
<p>2. Regarding point 3. above, provide responses to the Applicant's D7 response at D8.</p> <p><u>North Norfolk District Council Response:</u></p> <p>NNDC notes the applicant's response to Q3.5.3.8 and Q3.12.0.5 in their Deadline 7 response (REP7-017). This is also supplemented by the applicant's Position Statement Church Road, Colby (REP7-035) which considers the alternative proposals put forward by NNDC at Deadline 5 (REP5-067).</p> <p>The ExA will no doubt be aware that the primary issues raised by NNDC in relation to Church Road, Colby was to seek to minimise the loss of trees and hedgerows. The evidence presented by NNDC at Deadline 5 in response to ExQ2.12.0.3 identified six 'Important Hedgerows' affected by the project in this area alone where the LVIA noted 'loss of any trees here would have a significant effect'. If hedge and tree loss can be avoided, then this should be explored. NNDC welcomes the applicant undertaking the further work within the Position Statement.</p> <p>Whilst it is perhaps considered inevitable that within this document the applicant seeks to distance themselves from and have arguably overstated the negative impacts associated with the alternative proposal, what the Position Statement has helpfully provided is a more detailed analysis of how the open-cut trenching would affect the trees along Church Road, helpful detail that was missing from the project to date including the clarity as to which trees would have to be removed.</p> <p>Whilst NNDC do consider that the loss of the four identified trees would likely affect the character of this part of Church Road, as set at Deadline 5, ultimately it is a matter of planning judgment for the ExA in weighing the loss of trees against the public benefit of the project.</p> <p>NNDC certainly do welcome the proposed inclusion of text within the OLEMS document as set in paragraph 29 of the Position Statement. This should be included within the final OLEMS document and which will help guide contractors when undertaking works in the area.</p> <p>On balance, NNDC is prepared to withdraw its request for trenchless crossing under Church Road Colby on the proviso that the applicant makes every effort to protect as</p>	<p>impacts to tree and hedgerows and can confirm that the wording from paragraph 29 of the Position Statement [REP7-035] was included in the updated OLEMS (Version 4) submitted at Deadline 8 [REP8-005] in Section 9.1.3.1.</p>

Summary of Submission	Applicant's Comments
<p>much of the identified Important Hedgerows and as many of the trees in the areas as possible and make a positive contribution to replanting to ensure no net loss of trees.</p>	
<p><u>Q3.5.3.9 – Requirement 19: Implementation and maintenance of landscaping</u></p> <p>The ExA notes that discussion is ongoing regarding how a ten-year replacement period could be secured [REP6-036, Pages 47 to 54].</p> <ol style="list-style-type: none"> <li>1. Is agreement with the Applicant over a way of achieving replacement planting over a ten-year period (if required), which would avoid net loss in a worst case scenario, through wording in the OLEMS (or elsewhere other than the dDCO) likely to be reached in the timescale of this Examination?</li> <li>2. If so, what is it?</li> <li>3. If not, submit any additional information to assist the ExA in reaching its recommendation to the SoS.</li> </ol> <p><u>North Norfolk District Council Response:</u></p> <p>On 11 March 2020, NNDC wrote to the applicant on the subject of Article 27 and Requirement 19 with some suggested amendments to the wording of these parts of the DCO. This was followed up with a teleconference on 19 March (following the cancellation of the ISH planned for 17 March). The applicant was to consider further the wording proposed by NNDC.</p> <p>NNDC notes the updated draft DCO (version 6) submitted by the applicant at Deadline 7 (REP7-003 &amp; 004) and that revisions have been made, inter alia, to Article 27 and Requirement 19. This includes the insertion of a new definition of the maintenance period for North Norfolk in relation to the maintenance of landscaping in Article 27 and Requirement 19 has been amended along the lines suggested by NNDC so as to secure a ten-year replacement planting period.</p> <p>NNDC wishes to thank the applicant for these changes and, subject to these provisions being included within the final DCO, this matter is now agreed between the parties.</p>	<p>The Applicant is pleased an agreed position could be reached with NNDC.</p>
<p><u>Q3.5.7.4 – Schedule 16</u></p> <p>Parties to submit any additional information to assist the ExA in reaching its recommendation to the SoS.</p>	<p>Noted.</p>

Summary of Submission	Applicant's Comments
<p><u>North Norfolk District Council Response:</u> NNDC has nothing further to add to its previous submissions on this matter.</p>	
<p><u>Q3.5.7.5 – Planning Performance Agreements</u> Provide any update on matters since the response to responses to further written questions provided by the Applicant [REP6-014, responses to Q2.5.7.1].</p> <p><u>North Norfolk District Council Response:</u> Since Deadline 6, a teleconference took place on 12 March 2020 with representatives from Norfolk Boreas, all the District Councils and County Council where the applicant put forward their initial ideas and thoughts on a PPA to the potential discharging authorities for further consideration and discussion.</p> <p>The applicant subsequently followed this up with an email on 16 April which included a document titled 'VATTENFALL WIND POWER LTD - PLANNING PERFORMANCE AGREEMENT POINTS OF REFERENCE'. This is attached at Appendix A. This document sets out a range of issues for consideration in relation to a PPA and included as an Annex the information produced by NNDC at Annex B of its Deadline 6 submission [REP6-043].</p> <p>NNDC are currently considering the contents of this document and will provide further comment on its position to the ExA prior to completion of the examination.</p> <p>NNDC welcome the consideration of a PPA to discharge requirements, the key issue now is to determine how it will be delivered in a way that provides maximum public benefit.</p>	<p>Noted and the Applicant continues to discuss and develop the PPA with the relevant planning authorities.</p>
<p><u>Q3.12.0.7 – Church Road, Colby (open cut trench/ trenchless crossing)</u> Parties to submit any additional information to assist the ExA in reaching its recommendation to the SoS.</p> <p><u>North Norfolk District Council Response:</u> See response to Q3.5.3.8 above.</p>	<p>Noted.</p>
<p><u>Q3.12.1.1 – Mobilisation Areas</u> Are you content with the additional wording which the Applicant has added to the OCoCP [REP5-011, Section 3.2.1]?</p>	<p>Section 9.2.1 of the OCoCP [REP8-003] secures the commitment that '<i>Vehicles should be fitted with low noise reversing warnings where possible</i>', however the Applicant notes NNDC's request to also include in Section 3.2.1</p>

Summary of Submission	Applicant's Comments
<p><u>North Norfolk District Council Response:</u>            NNDC have reviewed the OCoCP (version 4) submitted at Deadline 8 [REP8-003] including content at Section 3.2.1.            NNDC would be happy with this document and the content at section 3.2.1 but subject to an addition recommending the use of white noise / low noise vehicle reversing warnings. This inclusion is considered unlikely to present a problem for the applicant given they are proposing to use modern and quiet equipment (fifth bullet point).</p>	<p>reference to white noise. The Applicant has therefore updated the OCoCP to include the following in Section 3.2.1 and Section 9.2.1;  <i>'Vehicles should be fitted with <b>white noise</b> / low noise reversing warnings where possible'</i></p>
<p><u>Q3.12.2.1 – Noise Sensitive Receptors</u>            The ExA notes the Joint Position Statement with North Norfolk DC on Noise Sensitive Receptors [REP6-022]. The ExA also notes unresolved matters with Broadland DC in the updated Statement of Common Ground (SoCG) [REP6-026], regarding the appropriateness of the position of sensitive receptors.</p> <ol style="list-style-type: none"> <li>1. The Applicant, North Norfolk DC and Broadland DC to submit a joint position statement regarding Noise Sensitive Receptors, as an update to the submissions [REP6-022] and [REP6-026]. Joint Position Statement to include detail on the process for reaching agreement (if agreement has not been reached) including implications if no agreement reached before close of Examination.</li> <li>2. The dDCO [REP5-044] defines noise sensitive locations (Noise Sensitive Locations) (NSL) as those in Table 25.27 of ES chapter 25 [APP-238]. Provide an updated table 25.27 in light of the joint position statement with North Norfolk DC and Broadland DC.</li> <li>3. Should the definition of NSLs in the dDCO [REP5-044] be updated to refer to the definition in the ES Chapter 25 [APP-238]? If not, is there a potential for confusion between NSLs as defined in the dDCO and NSRs as defined in the ES?</li> </ol>	<ol style="list-style-type: none"> <li>1. The Applicant welcomes NNDC's agreement on the Position Statement [REP7-034] and confirms that the information from paragraphs 29 - 32 has been included in the OCoCP (Version 4) [REP8-003].</li> <li>2. Noted.</li> <li>3. The Applicant refers to the response provided to ExA Q3.12.2.1 [REP7-017].</li> </ol>

Summary of Submission	Applicant's Comments
<p><u>North Norfolk District Council Response:</u></p> <ol style="list-style-type: none"> <li>1. An Updated Joint Position Statement on Noise Sensitive Receptors was submitted to the ExA by the applicant at Deadline 7 [REP7-034]. NNDC's position is set out within section 5 of that document (paragraphs 29-32) including some suggested amendments and additions. Subject to the inclusion of these suggested amendments, NNDC are content.</li> <li>2. Not in NNDC area – for applicant to respond</li> <li>3. NNDC would recommend/suggest calling the NSL's in the dDCO Operational NSL's and the Construction receptors in the OCoCP Construction NSR's</li> </ol>	
<p><u>Q3.12.2.3 – Enhanced Mitigation</u></p> <p>The Outline Code of Construction Practice (OCoCP) version 3 [REP5-011, para 131], refers to potential requirement for enhanced mitigation to be identified for specified receptors. North Norfolk DC and other discharging authorities to comment if “<i>potential requirement</i>” should be strengthened, and if so, propose wording.</p> <p><u>North Norfolk District Council Response:</u></p> <p>NNDC have reviewed the OCoCP (version 4) submitted at Deadline 8 [REP8-003] including content at Section 9.2.2 (para 135).</p> <p>NNDC consider it would be appropriate to amend para 135 (third sentence) to state:</p> <p>‘The potential requirement for enhanced mitigation has been identified in ES Chapter 25 and it is expected that enhanced mitigation will be required for the receptors identified in Table 9.2.’</p> <p>However, NNDC consider that, in addition, to those sites in Table 9.2, a considerable number of additional receptors types, as detailed in Table 9.1, which include non-residential receptors, will require standard or enhanced mitigation.</p> <p>This is because NNDC consider that the number of sites set out at paragraph 136 of the OCoCP (version 4) have been underestimated.</p>	<p>The Applicant is happy to accommodate NNDC's suggested amendment to paragraph 135 of the OCoCP (Version 4) [REP9-003] and the following has been amended in Version 5, submitted at Deadline 10:</p> <p><i>‘The potential requirement for enhanced mitigation has been identified in ES Chapter 25 and it is expected that enhanced mitigation will be required for the receptors identified in Table 9.2.’</i></p> <p>With regards to the comment on Table 9.2, the Applicant will be applying the Best Practicable Means (as listed in section 9.2.1) as standard noise mitigation throughout construction. With regards to enhanced mitigation it is acknowledged that the locations represented in Table 9.2 and assessed in the ES are only a number of representative locations and that in practice there could be more locations which could require enhanced mitigation, these will be identified at the detailed design stage and detailed in the final CoCP, as captured in Paragraph 136 OCoCP which states;</p> <p><i>‘It is acknowledged that there are other receptor locations in close proximity to the onshore cable route not specifically assessed with the ES. The locations identified in the ES will be used as indicators to identify potential receptors at similar distances from the cable route where enhanced measures may also be required. These locations and any required mitigation measures will be identified during the detailed design stage and included in the Construction Noise (and vibration) Management Plan, which will be</i></p>



Summary of Submission	Applicant's Comments
	<i>submitted to and reviewed by the relevant planning authority as part of the final CoCP and discharge of DCO Requirement 20(2).'</i>
<p><u>Q3.12.2.5 – Enhanced Mitigation</u></p> <ol style="list-style-type: none"> <li>1. North Norfolk DC and other discharging authorities, should the OCoCP [REP5-011, section 9.1.2.2] include a commitment for noise barrier locations to be agreed with relevant local planning authorities?</li> <li>2. Should there be a commitment for the assessment of the impact of noise barriers be carried out in consultation with the relevant local planning authorities?</li> <li>3. Applicant to comment.</li> </ol> <p><u>North Norfolk District Council Response:</u></p> <p>Items 1 and 2</p> <p>NNDC have reviewed the OCoCP (version 4) submitted at Deadline 8 [REP8-003] including content at Section 9.2.2.</p> <p>NNDC agree that the OCoCP should include commitments to consult and agree noise barrier locations and noise impact assessments with the relevant LPAs.</p> <p>NNDC welcome the applicant's response to Q3.12.2.5 including reference to Best Available Techniques (BAT) and Best Practicable Means (BPM). However, NNDC consider that, in addition, to those sites in Table 9.2, a considerable number of additional receptors types, as detailed in Table 9.1, which include non-residential receptors, will require standard or enhanced mitigation.</p> <p>This is because NNDC consider that the number of sites set out at paragraph 136 of the OCoCP (version 4) have been underestimated.</p> <p>NNDC notes the Applicant has set out that:</p> <p>'A Construction Noise (and vibration) Management Plan (CNMP) will be developed and included in the final CoCP, as required under Requirement 20 (2)(e) of the draft DCO and submitted for approval to the relevant planning authority. The CNMP will detail the design of onshore assets and will incorporate Best Available Techniques (BAT) and Best</p>	<p>The Applicant can confirm that OCoCP (Version 4) [REP8-003] includes the commitment that with respect to noise barriers <i>'The specification and location will be presented in the CNMP and subject to agreement with the Local Planning Authority.'</i></p> <p>The Applicant refers to the comments above on the response to ExA Q12.2.3 on Table 9.2 and the application of standard and enhanced mitigation.</p> <p>The Applicant confirms that the commits as detailed in in the Position Statement on Noise Sensitive Receptors [REP6-022] were included in the OCoCP (Version 4) submitted at Deadline 8 [REP8-003].</p>

Summary of Submission	Applicant's Comments
<p>Practicable Means (BPM) to minimise any associated noise impacts; where applicable, enhanced mitigation measures will also be detailed, such as noise barrier locations.</p> <p>The CNMP will be developed prior to construction when further details of the construction activities are known, this will ensure that the most appropriate controls and mitigations are identified. The development of the CNMP will include a review of the construction activities and the identification of any potential noise sensitive receptors....which may be affected.</p> <p>Based on the type of construction activity proposed, e.g. establishment of a mobilisation area, and the sensitivity of the receptor, the CNMP will then detail the appropriate controls which will be in place to minimise any potential effects. The results of the process will be submitted to and reviewed by the relevant planning authority as part of the final CoCP and discharge of DCO Requirement 20 (2).</p> <p>NNDC note and welcome the commitment from the Applicant to update the OCoCP to reflect this.</p>	
<p><u>Q3.13.2.1 – Tourism Mitigation Strategy</u></p> <p>The ExA notes that there is agreement between the Applicant and North Norfolk DC that the long-term effect on the long-term effects of the cable route on the tourism economy will be not significant. The ExA further notes that the disagreement between the parties is on the impact of cable corridor construction phase on local tourism businesses, the need for a tourism and associated business impact mitigation strategy, and securing this through a requirement in the dDCO.</p> <ol style="list-style-type: none"> <li>1. The Applicant to provide a brief summary of its assessment to the specific point about the impact of the cable corridor construction phase (including 150m workfronts, location and duration of installation of mobilisation area compounds, and landfall location) on local tourism and associated businesses.</li> <li>2. The Applicant to provide, without prejudice, wording for a dDCO Requirement relating to tourism and associated businesses in case the SoS decides to include such a Requirement</li> <li>3. Parties to submit any additional information to assist the ExA in reaching its recommendation to the SoS.</li> </ol>	<p>The Applicant refers to the response provided to ExA Q3.13.2.1 [REP7-017] for their position on tourism.</p>

Summary of Submission	Applicant's Comments
<p><u>North Norfolk District Council Response:</u></p> <p>NNDC's LIR [REP2-087] provided significant detail and evidence in relation to tourism impacts, starting from paragraph 14.21, including suggested wording for a DCO Requirement relating to tourism and associated businesses.</p> <p>At the Issue Specific Hearing on 21 January 2020 the ExA held over for written questions an update on discussions regarding the impact of the cable corridor construction on local tourism and businesses. NNDC provided a further update following the Issue Specific Hearing on 21 January 2020 at Deadline 4 [REP4-031 (Section 5)].</p> <p>NNDC note the Applicant's response to EXQ2.13.2.1 across pages 118 and 119 of the Applicant's Responses to the Examining Authority's Further Written Questions [REP5-045].</p> <p>NNDC also notes the Applicants response to EXQ3.13.2.1 across pages 132 to 136 of the Applicant's Responses to the Examining Authority's Third Round of Written Questions [REP7-017].</p> <p>The applicant continues to seek to downplay the impacts from this project on tourism and refuses to accept the tourism impacts asserted by NNDC.</p> <p>NNDC's position remains that if business owners in NNDC suffer as a result of the Actual Tourism Impact of Negative Perceptions associated with the individual and cumulative impact of windfarm cable route works, it would be neither fair or reasonable that those businesses should be affected as a result of the turbine project without some form of mitigation strategy being in place.</p> <p>The ExA are faced with a stark choice between the position of the applicant with no tourism mitigation against the sensible precautionary approach being advocated by NNDC which includes appropriate mitigation in the form of the Requirement wording suggested by NNDC at Deadline 2 [REP2-087] (Pages 32/33 – para 14.21).</p>	
<p><u>Q3.15.0.7 – Definition of secondary consent bodies:</u></p> <p>Comment on the Applicant's response at [REP6-014] to NNDC comment [REP5-067] on Q2.15.0.1 (that dDCO Requirement 25, in relation to watercourse crossings, refers specifically to some but not all secondary consent bodies) <i>"all parties who would be involved in the secondary consenting associated with watercourse crossings are captured and consulted under Requirement 25, these are the Environment Agency, Norfolk County</i></p>	Noted.

Summary of Submission	Applicant's Comments
<p><i>Council as Lead Flood Authority and Internal Drainage Board (captured under relevant drainage authorities)."</i></p> <p><u>North Norfolk District Council Response:</u></p> <p>NNDC are content with the response from the Applicant which clarifies that Internal Drainage Boards are to be included.</p>	

## 1.26 REP8-036 Norfolk County Council Response to the Examining Authority's third round of written questions

Summary of Submission	Applicant's Comments
<b>Response to the Examining Authority's third round of written questions</b>	
<p><u>Q3.5.3.8 - Requirement 16 (13): Trenchless installation techniques</u></p> <ol style="list-style-type: none"> <li>Provide any comments on the points above.</li> <li>Regarding point 3. above, provide responses to the Applicant's D7 response at D8.</li> </ol> <p><u>NCC Response:</u></p> <ol style="list-style-type: none"> <li>NCC note the Applicant now accepts it would be possible to provide a trenchless crossing design capable of being accommodated within the existing order limits [Applicant's response to ExA's third round question Q3.3.0.19]. NCC accept the point that accommodating an HDD at this location would constrain the project design prior to detailed design, however we argue that when balanced against the concerns raised by both NCC and Broadland District Council, the Applicant's reason is not sound or justifiable. It is NCC's position that trenchless crossing is the most appropriate method to minimise the overall impacts. NCC also direct the ExA's attention to the fact that subsequent to our Deadline 5 submission, Broadland District Council have also raised concerns with open cut trenching due to impact upon hedgerow.</li> <li>Whilst NCC disagrees with the Applicant's overall assessment in relation to trenchless crossings, nevertheless we do agree that should the SoS be minded to</li> </ol>	<ol style="list-style-type: none"> <li>The Applicant refers to the Applicant's response to ExA's third round of written questions [REP7-017] Q3.5.3.7. The Applicant's position remains that evidence has been submitted to the examination which demonstrates that open cut crossing methods are appropriate and feasible at this location. The Applicant has addressed every issue raised by Norfolk County Council (NCC) to reach a position where NCC has no technical reason to object to the open cut crossing method.  The Applicant refers to its response to the ExA's third round of questions [REP7-10] Q3.12.0.4 on concerns over impact to hedgerows and specifically that a trenched crossing does not result in a significant effect on hedgerows.</li> <li>The Applicant refers to the response to the ExA's third round of written questions [REP7-017], which confirms the Applicant's development of a bespoke contingency solution for a trenchless crossing of the B1149 should the Secretary of State decide that a trenchless crossing is necessary.</li> </ol>

Summary of Submission	Applicant's Comments
<p>accept trenchless crossing of the B1149, then this location will need to be included as an addition at Requirement 16(13), with reciprocal changes in Schedule 6 and Schedule 8 of the dDCO.</p>	
<p><u>Q3.12.0.2 B1149 Crossing</u></p> <p>The ExA notes the arguments presented by the Applicant in the Clarification Note Trenchless Crossings B1149 and Church Road, Colby [REP04-017], by NCC in its D5 submission [REP5-066], and by the Applicant in its response [REP6-013].</p> <p>1. Parties to submit any additional information to assist the ExA in reaching its recommendation to the SoS.</p> <p><u>NCC Response:</u></p> <p>NCC maintains its view that an open cut method of duct installation at this specific point on the B1149 is not appropriate.</p> <p>NCC note the Applicant now accepts traffic signals would be required 24 hours a day, reducing the carriageway to one-way flows. With this in mind, we note the Applicant's reference to paragraph D5.1.6 of Chapter 8: -</p> <p>“...On roads where flows are very high, overload of the controlled area is possible and exceptional delays may result. This can occur with two-way flows as low as 1300 vehicles per hour (for sites about 50m long)”</p> <p>However, the Applicant' has only quoted part of the text which goes on to say:</p> <p>“...and with a one-way flow of 900 vehicles per hour (for longer sites with balanced flows) with signal control.”</p> <p>The B1149 peak hourly traffic flows (Norfolk Boreas; combined with Hornsea3; plus baseline traffic) are forecast to be in the order of 900 movements and signal control is required for in excess of 50m, thereby reducing the road to single flows. Accordingly exceptional delays may result.</p> <p>Chapter 8 goes on to say – “...If this is likely to occur, the designer will have to consider the implications and possible alternative options, for example, diversions or restrictions on the hours of working”. Neither of these are possible given</p> <p>(i) the route needs to be kept open for the abnormal loads associated with Hornsea 3 and</p>	<p>For clarity, the Applicant has referenced only the relevant section of the DfT publication Traffic Signs Manual, Chapter 8 (Part1) Paragraph D5.1.6:</p> <p><i>“...On roads where flows are very high, overload of the controlled area is possible and exceptional delays may result. This can occur with two-way flows as low as 1300 vehicles per hour (for sites about 50m long)”</i></p> <p>‘Chapter 8’ defines site length by a measurement between datums positioned at the entry and exit cone tapers (Plans SC7 and SC8 detail). The drawings presented in the Updated Trenchless Crossing Clarification Note [REP8-029], Appendix 3] confirms that the site length is within the 45m Order limits and therefore complies with the 50m long Chapter 8 guidance.</p> <p>Notwithstanding, it is evidenced in the Updated Trenchless Crossing Clarification Note [REP8-029, Table 3.1], both the forecast 2023 AM (846) and PM (904) peak <u>two-way</u> flows (for both Project alone and cumulative traffic flows) are approximately half of the Chapter 8 threshold of 900 <u>one-way</u> vehicle flows for longer sites whereby traffic ‘overload’ may occur. Therefore the traffic management measures would fully comply with the guidance and there will be no exceptional delays resulting from open cut trenching.</p> <p>The Updated Clarification Note (Trenchless Crossings) [REP8-029] confirms that in response to NCC’s maintenance concerns, Norfolk Vanguard Ltd. commissioned local pavement specialists, the Norfolk Partnership Laboratory (also referred to as Norse Group) to investigate ground conditions at the B1149 and ascertain if an appropriate road reinstatement specification is feasible.</p> <p>NPL undertook four core sample ground investigations in the approximate location of the proposed open cut trench crossings on the B1149 which</p>

Summary of Submission	Applicant's Comments
<p>(ii) traffic signals are required 24 hours per day preventing restrictions on the hours of working.</p> <p>Whilst NCC have not raised an objection relating to driver delay, nevertheless we wish to point out that such an impact lies on the cusp of acceptability and it is not as clear cut as the Applicant indicates.</p> <p>NCC recognises that Norse laboratory has provided a construction specification, however the issue of long-term maintenance liability remains a significant concern, particularly given the potential for other future large-scale projects and their associated HGV load movements. Rural road structure can vary greatly, and with an increasing volume of base level traffic (notwithstanding the additional loading from these HGV movements) any weakening of the surface construction derived from breaking open the bound and subgrade layers will greatly increase the risk of carriageway failure for years to come.</p> <p>NCC notes no detailed project timeframe has been provided and whilst the Applicant states a full and detailed construction method statement could be included within the final CoCP, as secured by Requirement 20(2)(g) of the dDCO, that would be too late to make the appropriate assessment. NCC have not seen a breakdown to show how the figure of “up to” 72 daily additional HGV movements along the B1149 and The Street at Oulton has been derived - for example is that just for one day? We are not clear what “up to” actually means and are not convinced it would be every day for 8 weeks which seems to be implied.</p> <p>Whilst the Applicant indicates active construction works would not be required outside of construction hours, that does not address the point we make. NCC's point is that disruption would take place 24 hours per day as a direct result of the traffic signals, including noise associated with traffic stopping and starting at the signals during night-time hours.</p> <p>NCC note the Applicant's contractor will be expected to use their best endeavours to programme the works to avoid the cumulative AIL scenario and this is welcomed. It would need to be captured in the final CTMP, if the ExA agrees with the Applicant that open cut trenching is appropriate.</p> <p>NCC note the Applicant's comment that: -</p>	<p>determined there is good load bearing and accordingly the road can be suitably reinstated. Utilising this information, a specification is presented to address the risk of differential settlement and reflective cracking and therefore minimise future maintenance liability.</p> <p>The New Road and Street Works Act (NRSWA) contains provisions to protect the 'Street Authority' (NCC) from the liabilities arising from trench reinstatement. Section 71 of the Act places a duty on the undertaker (the Applicant) to “ensure that the reinstatement conforms to such performance standards as may be prescribed”. Section 71 also contains provisions for the Street Authority to fine the undertaker for non-compliance.</p> <p>Under the provisions of NRSWA Section 71, the DfT issued the Statutory Code of Practice “Specification for the Reinstatement of Openings in Highway” (now on the third edition) which clearly sets out the performance standard for trench reinstatement. Of relevance to the B1149 crossing, the Code prescribes the guarantee period shall begin on completion of the permanent reinstatement and shall run for three years in the case of deep openings. The Code also makes provisions for re-starting the guarantee period should the reinstatement fail (at any time during the three years), and remedial works are required.</p> <p>It is therefore concluded that the implementation of NPL's specification for trench reinstatement, together with the provisions of NRSWA provides NCC with adequate protection against future maintenance liability.</p> <p>The Applicant set out the HGV movements and timescales associated with an open cut and trenchless crossing method of the B1149 in the Updated Trenchless Crossing Clarification Note [REP8-029], under Table 2.1. It was detailed that at the specific B1149 crossing, with traffic management measures, an open cut trenched crossing would require up to 38 HGV deliveries (72 movements) in the worst case to conduct both the crossing and create the necessary temporary diversion lanes of a maximum width to accommodate Hornsea Project Three abnormal loads. For absolute clarity</p>

Summary of Submission	Applicant's Comments
<p>“...NCC’s current position can be interpreted as contradictory; effectively advocating an access with associated traffic management and environmental impact in the same location that the lesser impacts of an open cut trench are objected to.</p> <p>However, the Applicant is not comparing like with like. NCC’s assessment is that whilst not ideal, trenchless crossing for this location is preferable to open cut trenching. Similarly, whilst an access for a haul road at this location is also far from ideal, nevertheless it is preferable to the alternative of taking the construction traffic through Cawston village.</p> <p>In conclusion, NCC can see nothing to change the view we have previously expressed and still wish to see a trenchless crossing method employed. NCC believe this to be reasonable, especially given the Applicant acknowledges it is within their ability to provide.</p>	<p>the term “up to” refers to the maximum likely HGV deliveries for the entire duration of the trenching activity (confirmed as two weeks in Table 2.1).</p> <p>In comparison, the contingency bespoke trenchless crossing for the B1149, limited to a HDD method only with one temporary compound retained within the Order limits, would require in the order of 220 HGV deliveries.</p> <p>The Applicant has been forthcoming with evidential data to allow an appropriate assessment of the crossing method of the B1149 to be taken throughout the examination. It has been clear that considering site specific and bespoke requirements of the B1149 crossing, an open cut method would result in a shorter construction timescale and reduced HGV delivery requirements (and therefore reduced environmental impacts) in comparison to a trenchless method.</p>
<p><u>Q3.12.0.4 - B1149 Crossing (open cut trench/trenchless crossing)</u></p> <p>Provide your views on the effect on hedgerows and trees in relation to the trenchless crossing and proposed diversion lane under discussion for the B1149, as mentioned by NCC [REP5-066, final page].</p> <p><u>NCC Response:</u></p> <p>In direct response to the ExA’s questions raised during ISH3, the Applicant indicated their sole reasoning for conducting open cut trenching was on environmental grounds. The point NCC makes is the additional loss of hedgerow has only very recently come to light due to amendments to the Applicant’s traffic management measures. Accordingly it needs to be considered as part of the overall environmental impact.</p>	<p>The Applicant refers to its response to the ExA’s third round of questions [REP7-10] Q3.12.0.4 on concerns over impact to hedgerows and specifically that a trenched crossing does not result in a significant effect on hedgerows.</p> <p>As detailed in the Clarification Note Trenchless Crossings [REP8-029] a number of factors need to be considered when comparing trenched and trenchless crossings, including environmental impacts. A trenchless crossing at this location would remove the direct impact of the hedgerow removal, however this can be mitigated by the hedgerows being reinstated. A trenchless crossing at this location would give rise to other environmental impacts as detailed in the Norfolk Vanguard Environmental Assessment for Trenchless Crossing of B1149 [REP7-033], particularly potential significant noise impacts at the nearest residential property. The application of open cut trenching or trenchless crossing methods have been carefully considered, acknowledging the benefits and drawbacks of each methodology, as presented within the Clarification Note Trenchless Crossings [REP8-029].</p>



Summary of Submission	Applicant's Comments
<p><u>Q3.12.0.6 Church Road, Colby (open cut trench/ trenchless crossing)</u></p> <p>Comment on the highways aspects of the Applicant's reasoning for not adopting NNDC's suggested alternative accesses which would enable a trenchless crossing [REP6-014, response to NNDC's response to Q2.9.3.1] regarding the introduction of new junctions, their proximity to each other and to an existing junction, their location opposite the farm access, the bend in the road and visibility, the HGV movements and the timescale (as set out in the second two bullet points). In responding include reference to and comparison with the Applicant's proposal, which also includes an access near the same bend in the road [APP-011, Sheet 13 of 42, AC59] and [REP4-017].</p> <p><u>NCC Response:</u></p> <p>NCC note the Applicant's concerns in relation to visibility splay lengths and the duration of the works but remain satisfied that during construction, safety at the temporary accesses could be controlled and managed via appropriate traffic management measures. The exact details can be confirmed within the CTMP post consent. Accordingly, NCC reaffirm that we have no objection to the amendments proposed by NNDC.</p>	<p>The Applicant maintains that the access proposed by NNDC could introduce a significant road safety risk to road users along Church Road which could be avoided by the access crossing remaining within the Order limits.</p> <p>However, as detailed in the Statement of Common Ground with North Norfolk District Council (NNDC) (Version 3, submitted at Deadline 9) the Applicant and NNDC are in agreement regarding the mitigation of any potential impacts of a trenched crossing at Church Rd, Colby and NNDC have withdrawn their request for a trenchless crossing.</p>
<p><u>Q3.14.0.1 Outline Traffic Management Plan</u></p> <p>Update your position on the OTMP [REP5-024 - REP5-028] and highlight any matters that remain unresolved.</p> <p><u>NCC Response:</u></p> <p>There remains a possible driver compliance issue with the highway intervention scheme for link 34 at Cawston. Whilst the Applicant has incorporated possible solutions within the Outline CTMP, NCC would like to see the list of solutions expanded with a commitment to reduce the volume of traffic downwards from 239 HGV movements per day until a point is reached where (via on site monitoring) there is no longer a compliance issue - where this proves necessary.</p> <p>The CTMP still needs to be updated to include the following: -</p> <ul style="list-style-type: none"> <li>• Explanation of how condition surveys will be undertaken and monitored.</li> <li>• A method for undertaking the technical vetting for the detailed design of all off-site highway works.</li> </ul>	<p>The Applicant has engaged with NCC and the final SoCG submitted at Deadline 9 [REP9-015] confirms agreement on these matters. The OTMP submitted at Deadline 10 has been updated accordingly.</p>

Summary of Submission	Applicant's Comments
<ul style="list-style-type: none"> <li>Acceptance of responsibility for any part 1 claims under the Land Compensation Act that are directly attributable to the Applicant's off-site highway works.</li> </ul>	
<p><u>Q3.14.1.2 Highway Intervention Scheme for Link 34 (B1145 through Cawston)</u></p> <p>What are your views on the suitability of the revised Highway Intervention Scheme (HIS) [REP5-028, appendix 6] to mitigate the effects of construction traffic on link 34 Cawston Village, in light of the Road Safety Audit (RSA) and the Applicant's responses to the recommendations [REP5-055].</p> <p><u>NCC Response:</u></p> <p>Whilst we have no objection to the Applicant's highway intervention scheme (Option 1), nevertheless we have identified a diver compliance issue. This was also identified within the Applicant's Road Safety Audit which recommended a review of "...the compliance of drivers following the introduction of the reduced speed limits and introduce further measures if necessary"</p> <p>If parking occurs outside the designated parking areas; traffic fails to yield at the correct points; or if traffic speeds are much higher than 20mph, the proposed intervention scheme could fail.</p> <p>Whilst the RSA did not indicate what "further measures" can be introduced, it is NCC's position that the options are limited in the main to: -</p> <p>(i) Reducing the volume of traffic passing through Cawston from 239 HGV movements per day until a point is reached where there is no longer a compliance issue. However, we fully understand this would lengthen the duration of the project and impact upon the contractor.</p> <p>Or</p> <p>(ii) Introduce a one-way system with the HGV traffic entering the village but exiting via Option 5. We do not support this option as it has several significant safety problems – see our response to Q3.14.1.8 below.</p> <p>In response to our concern, the Applicant has agreed to intensify the monitoring regime to facilitate early warning of issues. Whilst this is welcome and would help identify the exact nature of the problem, it does not in itself provide the solution.</p>	<p>The Applicant notes NCC have no objection to the Cawston Highway Intervention Scheme (HIS). The scheme design has evolved through stakeholder engagement, three DCO examinations and has been subject to two Road Safety Audits which gives a level of assurance that the highway engineering and associated mitigation package will mitigate any significant impacts.</p> <p>The Applicant has undertaken further engagement with NCC and confirmed that Option 5, Heydon Road (Long Lane) as a diversion route for HGVs is no longer proposed as an intervention measure.</p> <p>In addition, the Applicant has confirmed that there is no in principle objection to targeted reduction in HGV demand as part of the suite of intervention measures previously outlined in the OTMP [REP8-007].</p> <p>In accordance with that position, the following additional intervention option has been agreed with NCC:</p> <p>"Incrementally reducing the volume of traffic passing through Cawston from 239 HGV movements through targeted intervention informed by monitoring and consultation with the Highway Authority".</p> <p>The OTMP submitted at Deadline 10 has been updated accordingly.</p> <p>The Applicant's understanding is that all NCC matters of concern relating to the Cawston Highway Intervention Scheme have now been resolved.</p>

Summary of Submission	Applicant's Comments
<p>The Applicant's solution is: -</p> <ul style="list-style-type: none"> <li>• Rectify any breach of requirements. We fully accept this may be necessary if the problem is limited to a breach of the requirements, but that is not the issue we have identified.</li> <li>• Introduce warning hazard signs. However, we have already identified the points at which poor compliance is likely to occur and there is no realistic prospect of introducing additional signs at those points.</li> <li>• Introduce mandatory give-way. This does not form part of the current scheme as it could make matters worse.</li> <li>• Increased parking enforcement. We agree this may be beneficial and necessary but offers only a partial solution.</li> <li>• A reduction in the cumulative HGV cap (239 HGV movements) by ensuring Norfolk Boreas and Hornsea 3 traffic demand does not overlap. We agree this may go some way to addressing the problem but NCC would like to see a commitment to reducing the volume of traffic downwards from 239 HGV movements per day until a point is reached where (via on site monitoring) there is no longer a compliance issue - which is slightly different to the Applicant's proposal.</li> </ul>	
<p><u>Q3.14.1.4 Highway Intervention Scheme – additional information</u></p> <p>Provide any additional information to assist the ExA in making its recommendation to the SoS in respect of the Highway Intervention Scheme.</p> <p><u>NCC Response:</u></p> <p>NCC have no additional issues to raise</p>	<p>The Applicant's understanding is that all NCC matters of concern relating to the Cawston Highway Intervention Scheme have now been resolved.</p>
<p><u>Q3.14.1.5 Road Safety Audit</u></p> <p>1. Would the proposed maintenance regime of grass cutting of visibility splays, address the problem highlighted in the RSA of ongoing maintenance and how would overhanging vegetation be managed?</p> <p>2. Provide any additional information to assist the ExA in making its recommendation to the SoS in respect of the Highway Intervention Scheme.</p> <p><u>NCC Response:</u></p>	<p>1. The Applicant welcomes confirmation on the proposed vegetation maintenance regime.</p> <p>2. The Applicant welcomes confirmation that the scheme has passed the RSA and refers to the comments provided above on NCC's response to Q3.14.1.2 which indicated that methods for addressing potential driver compliance have now been agreed with NCC.</p>

Summary of Submission	Applicant's Comments
<p>(i) NCC agree with the Applicant's proposed cutting specification for visibility splays, namely five cuts during the growing season (May to September) applied to the overhanging vegetation.</p> <p>(ii) The objective of the road safety audit is to identify aspects of engineering interventions that could give rise to road safety problems and to suggest modifications that could improve road safety. It is important to note that road safety audit is not intended to be a technical check of compliance with design requirements. Whilst the scheme passed the RSA, nevertheless NCC have raised a potential concern regarding driver compliance, namely that drivers may fail to yield at pinch points. See also our response at Q3.14.1.4.</p>	
<p><u>Q3.14.1.7 Cumulative traffic effects in Cawston</u></p> <p>1. In order to account for both scenarios, should the reference to the 'first project' include Norfolk Vanguard, alongside Norfolk Boreas and Hornsea Project Three?</p> <p>2. The Applicant to update the document reference for the OTMP to reflect the most recent OTMP (Version 3) [REP5-026].</p> <p>3. In light of the colour coding in the SoCG [REP6-037] and the final line in the above statement, set out what specific matters are still under consideration. Provide any additional information to assist the ExA in making its recommendation to the SoS.</p> <p><u>NCC Response:</u> NCC have no comments to add.</p>	<p>Noted</p>
<p><u>Q3.14.1.8 Alternative traffic movement through Cawston</u></p> <p>1. The Applicant to submit separate drawings for Options 2, 3 and 4 [REP5-054] for the Alternative Cawston Access Options. Provide any further information for all three options that can help understand the options as discussed with IPs.</p> <p>2. Does the Applicant intend to develop further any of the Options 2 or 3 or 4 or all three? What is the process for reaching an agreement between Applicant, NCC, Broadland DC and Cawston PC over Options 2 or 3 or 4 for the movement of construction traffic, and implications if no agreement reached before close of Examination?</p>	<p>The Applicant welcomes that NCC have no objection to Option 1, the highway intervention scheme. With regards to it no longer being the preferred option the Applicant has, in response to the Third Written Questions [REP7-017] Q3.14.1.8, given clear reasons why the alternative options are unworkable and disproportionate, including amongst other points as detailed in that response, that they would not apply to either Norfolk Vanguard or Hornsea Project Three.</p> <p>In addition to NCC's position that there is no objection to option 1, the Highway Intervention Scheme (HIS) (confirmed in the NCC response to</p>

Summary of Submission	Applicant's Comments
<p>3. The Applicant to respond to the concerns raised by NCC regarding Option 5 [REP5-054] as further mitigation alongside Option 1 (current HIS).</p> <p>4. The Applicant to set out the possibility of using Option 5 as further mitigation alongside Option 1 (current HIS), including timescales for addressing NCC's concerns, consulting with IPs, and submission into the Examination? How could this be agreed with Vanguard and Hornsea Three and secured in the DCO?</p> <p><u>NCC Response:</u></p> <p>At the end of the Vanguard examination, no agreement was reached regarding the acceptability of the Cawston highway intervention scheme. As we indicated within our response to the ExA's first round of written questions for the Boreas hearing (Q1.2.3) submitted on 3 December 2019: -</p> <p>"The applicants have not submitted any further details to us since the closure of the Norfolk Vanguard hearings. At ISH6 to the Vanguard hearing the County Council indicated the following documents were due to be received from Orstead by 3 May 2019: -</p> <ul style="list-style-type: none"> <li>• Topographical Survey</li> <li>• New ATC speed survey</li> <li>• Update of the design through Cawston based on the safety audit and NCC comments</li> <li>• Vehicle traffic through Cawston based on the topographical survey</li> <li>• Update of the safety audit</li> <li>• Update of the Cawston report.</li> </ul> <p>The above was not received prior to the opening of the Boreas examination and the Applicant instead sought to progress the Cawston intervention scheme during the examination itself. The ExA will be aware we have only recently received the essential RSA.</p> <p>It is inevitable views on all sides may change due to receipt of additional information not previously made available and it would be inappropriate to dig our heels in and defend a previous position come what may. Having now received the relevant information, whilst we have no objection to the Applicant's highway intervention scheme, which involves</p>	<p>Q3.14.1.2, see above), the Applicant also refers to the Applicant's comments on the NCC response to Q3.14.1.2 above, which confirms that methods for addressing potential driver compliance have now been agreed with NCC. As such, and whilst in hindsight it may not be NCC's preferred solution, it has been agreed with NCC that option 1 (the Highway Intervention Scheme) is an appropriate and workable solution to mitigate traffic impacts of the Project on Cawston alone, and cumulatively with other projects, to an acceptable level and there are no outstanding issues remaining to resolve for option 1.</p>

Summary of Submission	Applicant's Comments
<p>directing traffic along Cawston High Street (Option 1), that is no longer our preferred solution.</p> <p>In highway terms the Applicant's Option 2 is preferred as it has the potential to remove all construction traffic from Cawston. Failing that, NCC would also support Options 4; 3; and then Option 1 (listed in order of preference due to traffic impact).</p> <p>NCC does not support Option 5 as the highway network is not suitable to cater for the traffic proposed due to poor junction alignment; forward visibility issues and unsuitable narrow rural lanes. In addition, the fabric of the road is insufficient to support the volume of HGV use proposed.</p> <p>The Applicant provided updated drawings for Option 5 during a meeting on the 16th March 2020, however apart from providing 4 additional passing places the updated drawings do not address the concerns we have raised. In addition, it is now evident the Applicant's proposal would involve filling in a drainage ditch which (apart from the obvious drainage implications) does not form part of the public highway and lies outside the Applicant's Order limits.</p> <p>Whilst not objecting to the Applicant's highway intervention scheme (Option 1), nevertheless we have identified a diver compliance issue and we have advised the Applicants they need to look at solutions in advance. We believe there are two possible options – either</p> <ul style="list-style-type: none"> <li>(i) reduce the volume of HGV traffic passing through Cawston down from the capped 239 HGV movements per day (which would lengthen the duration of the project).</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>(ii) Introduce a one-way system with HGV's entering the village but exiting via Option 5. As indicated above, we do not support this as it has several significant safety problems and also the fabric of the road is not sufficient to cater for that volume of traffic.</li> </ul>	

Summary of Submission	Applicant's Comments
<p>Whilst the Applicant indicates that "...Ultimately, Option 5 is not required to mitigate the impacts on Cawston", nevertheless there is still a driver compliance issue and we do not wish to see the Applicant seek to revert to Option 5 as a means of trying to rectify that issue.</p> <p>NCC fully accept that traffic management measures potentially lasting 24 months are of a different magnitude to the measures required during a trenched crossing, however our concern related to whether safe traffic management could be provided at all, rather than the duration of the works.</p>	
<p><u>14.2 Cable Logistics Area (CLA) along Link 68 in Oulton - Cycle Routes</u></p> <p>Are you convinced that the Highway Mitigation Scheme for Link 68 [REP5-026] [REP5-045] is adequate to enable NMUs to continue using The Street and Heydon Road, safely? The ExA acknowledges that this location has no national, regional or local designation as a cycle route/walking route. However, in your response take into account the ExA's observations at USI on 20 January 2020 [EV2-003], and Oulton PC's submission [REP6-044].</p> <p><u>NCC Response:</u></p> <p>Whilst the location has no national, regional or local designation as a cycle route/walking route, nevertheless NCC recognise there will inevitably be some use by NMU's. The only difference being in the level of demand is less.</p> <p>We note the ExA's observations at USI on 20 January 2020 [EV2-003], and Oulton PC's submission [REP6- 044] but our view remains - the Highway Mitigation Scheme for Link 68 [REP5-026] [REP5- 045] is adequate. The Highway Mitigation Scheme was assessed as part of the RSA conducted by Hornsea 3 which included an assessment of suitability for NMU's. The RSA covered the cumulative scenario for all three wind farms.</p>	Noted
<p><u>Q3.14.4.9 Outline Access Management Plan and Access to Works plan</u></p> <ol style="list-style-type: none"> <li>1. Distinguish between the types of accesses included in Outline Access Management Plan (OAMP) [APP-701] and the Access to Works plan [APP-011]?</li> <li>2. Provide a full list of the different types of accesses by reference to appropriate plans.</li> <li>3. Identify and justify all anomalies and exclusions. For instance, explain why some access routes, such as AC11, which appears to be a point of access to the onshore cable route</li> </ol>	Noted



Summary of Submission	Applicant's Comments
<p>[APP-701, para 3, bullet 3] is not in Table 2.1, and access routes such as AC131, which appears to be an access to works, is included in Table 2.1.</p> <p>4. Update the OAMP accordingly to include the explanations provided in 1-3 above, and any additional information as relevant.</p> <p>5. NCC to comment.</p> <p><u>NCC Response:</u> NCC have no issues to raise.</p>	

## REFERENCES

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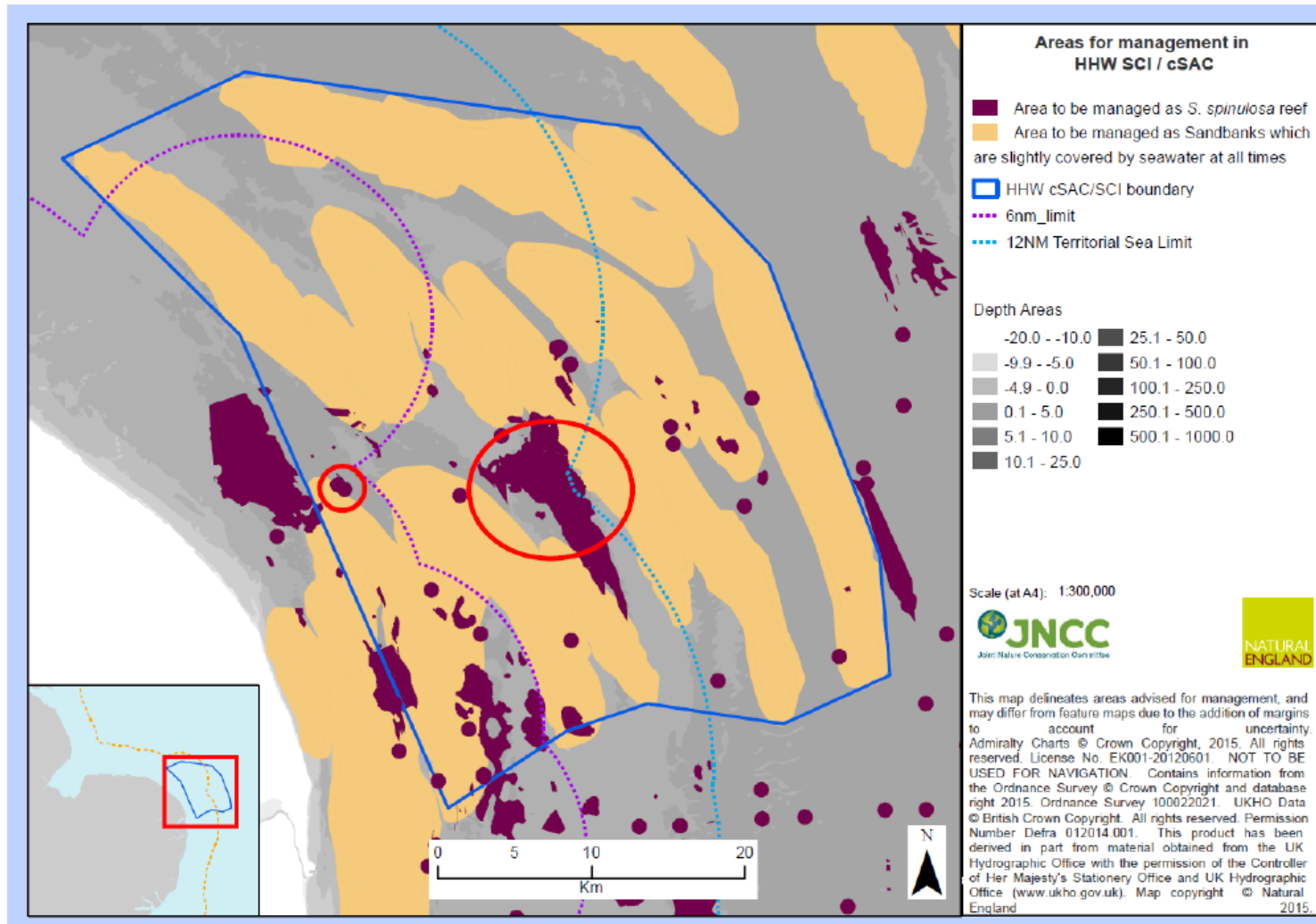
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Appendix 1 Figure 1 from Natural England's submission to the Norfolk Vanguard Examination [REP6-032]



Appendix 1 Figure 2 from Appendix 2.2 of Natural England’s Relevant Representation [RR-099]. Blue hatching shows the proposed fisheries closure

