

# Norfolk Vanguard Offshore Wind Farm Applicant's Comments on the Report on the Implications for European Sites (RIES)

Applicant: Norfolk Vanguard Limited  
Document Reference: ExA; RIES; 10.D8.5  
Deadline 8

Date: 30 May 2019  
Author: Royal HaskoningDHV and MacArthur Green

*Photo: Kentish Flats Offshore Wind Farm*



Date	Issue No.	Remarks / Reason for Issue	Author	Checked	Approved
24/05/19	01D	First draft for Norfolk Vanguard Ltd review	MT, GK, GC	GK	
30/05/19	02F	Deadline & Submission	MT, GK, GC	GK	RS

## Table of Contents

1	Introduction .....	1
2	Applicant’s response on the RIES Overview (Section 2) .....	2
3	Applicant’s response on the RIES Stage 1: Likely Significant Effects (Section 3) .....	5
4	Applicant’s response on the RIES Stage 2: Adverse Effects on Integrity (section 4) ....	7
5	Applicant’s response on the RIES Alternatives, Compensation And IROPI (Section 5)	7
6	Applicant’s Response on Annex 1 of the RIES.....	7
7	Applicant’s Response on Annex 2 of the RIES.....	8
7.1	Flamborough and Filey Coast SPA .....	8
7.2	Greater Wash SPA .....	9
7.3	Outer Thames Estuary SPA and pSPA .....	10
7.4	Norfolk Valley Fens SAC .....	10
7.5	Broadland SPA and Ramsar .....	11
7.6	Breydon Water SPA and Ramsar Site.....	12
7.7	North Norfolk Coast SPA and Ramsar Site.....	12
8	Applicant’s Response on Annex 3 of the RIES.....	14
8.1	Alde-Ore Estuary SPA and Ramsar .....	14
8.2	Flamborough and Filey Coast SPA .....	15
8.3	Greater Wash SPA .....	17
8.4	Outer Thames Estuary SPA.....	19
8.5	Haisborough Hammond and Winterton SAC .....	19
8.6	Southern North Sea SAC.....	23
8.7	Paston Great Barn SAC.....	24
8.8	River Wensum SAC .....	25
8.9	Norfolk Valley Fens SAC .....	26
8.10	The Broads SAC .....	26
8.11	Broadland SPA and Ramsar .....	27
8.12	Breydon Water SPA and Ramsar .....	28
8.13	North Norfolk Coast SPA and Ramsar .....	28
9	Conclusion.....	29
10	References .....	30

**Tables**

Table 1 Applicant’s Response on Section 2 of the RIES	2
Table 2 Applicant’s Response on Section 3 of the RIES	5
Table 3 Applicant’s Response on Screening Matrix 1	8
Table 4 Applicant’s Response on Screening Matrix 2 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	9
Table 5 Applicant’s Response on Matrix 3	10
Table 6 Applicant’s Response on Screening Matrix 4 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	10
Table 7 Applicant’s Response on Screening Matrix 5 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	11
Table 8 Applicant’s Response on Screening Matrix 6 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	12
Table 9 Applicant’s Response on Screening Matrix 7 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	12
Table 10 Applicant’s Response on Integrity Matrix 1 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	14
Table 11 Applicant’s Response on Integrity Matrix 2 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	15
Table 12 Applicant’s Response on Integrity Matrix 3 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	17
Table 13 Applicant’s Response on Integrity Matrix 4 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	19
Table 14 Applicant’s Response on Integrity Matrix 5 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	19
Table 15 Applicant’s Response on Integrity Matrix 6 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	23

Table 16 Applicant’s Response on Integrity Matrix 7 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	24
Table 17 Applicant’s Response on Integrity Matrix 8 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	25
Table 18 Applicant’s Response on Integrity Matrix 9 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	26
Table 19 Applicant’s Response on Integrity Matrix 10 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	26
Table 20 Applicant’s Response on Integrity Matrix 11 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	27
Table 21 Applicant’s Response on Integrity Matrix 12 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	28
Table 22 Applicant’s Response on Integrity Matrix 13 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)	28

## Glossary

AEoI	Adverse Effect on Integrity
cSAC	candidate Special Area of Conservation
DAS	Discretionary Advice Service
DCO	Development Consent Order
dDCO	draft Development Consent Order
DEFRA	Department of Environment, Food and Rural Affairs
DML	Deemed Marine Licence
ExA	Examining Authority
HHW	Haisborough, Hammond and Winterton
HRA	Habitats Regulations Assessment
IROPI	Imperative Reasons of Overriding Public Interest
ISH	Issue Specific Hearing
LSE	Likely Significant Effect
MMO	Marine Management Organisation
NE	Natural England
OCoCP	Outline Code of Construction Practice
OLEMS	Outline Landscape and Ecological Management Strategy
OSPAR	Oslo Paris Convention
O&M	Operations and Maintenance
PEMP	Project Environmental Management Plan
pSPA	potential Special Protection Area
PVA	Population Viability Analysis
RIES	Report on the Implications for European Sites
RSPB	Royal Society for the Protection of Birds
RTD	Red Throated Diver
SAC	Special Area of Conservation
SAD	Selection Assessment Document
SCI	Site of Community Importance
SIP	Site Integrity Plan
SPA	Special Protection Area
SoCG	Statement of Common Ground
SSSI	Site of Special Scientific Interest

## 1 INTRODUCTION

---

1. The Applicant submitted an Information to Support Habitats Regulations Assessment (HRA) report (document 5.3) with the Norfolk Vanguard Development Consent Order (DCO) application submission in June 2018 and has continued to engage with relevant Interested Parties throughout the Examination. As a result of this engagement, the Applicant has made a number of additional commitments throughout the Examination in response to comments from Natural England (NE), the Marine Management Organisation (MMO) and the Royal Society for the Protection of Birds (RSPB).
2. The Examining Authority (ExA) with the support of the Planning Inspectorate Environmental Services Team provided the Report on the Implications for European Sites (RIES) on the 9 May 2019. The Applicant has reviewed the RIES and Sections 2 to 8 of this document provide the Applicant's comments on the RIES.
3. The Applicant notes that the RIES reflects information provided to the Examination up to Deadline 7 and that the Applicant has continued to work closely with NE, RSPB and the MMO with the aim of progressing outstanding matters in relation to the HRA.
4. The following additional information was submitted by the Applicant on 14<sup>th</sup> May 2019 and at Deadline 8 which is of relevance to the Integrity Matrices and the Applicant has included specific reference to these in Section 8 where applicable:
  - Deterministic Collision Risk Modelling for revised layout scenarios and increased draught height (Document Reference ExA; AS; 10.D7.21).
  - Offshore Ornithology Cumulative and In-combination Collision Risk Assessment (Update) (Document Reference ExA; AS; 10.D7.21).
  - Auk Displacement Assessment Update (Document Reference ExA; AS; 10.D8.10).

## 2 APPLICANT'S RESPONSE ON THE RIES OVERVIEW (SECTION 2)

5. Table 1 provides the Applicant's response on Section 2 of the RIES.

**Table 1 Applicant's Response on Section 2 of the RIES**

Paragraph	Applicant's Response
2.2.2	In response to Natural England's comments regarding the potential for disturbance/ displacement of red-throated diver (RTD) in the Greater Wash Special Protection Area (SPA) and Outer Thames Estuary SPA due to operation and maintenance vessel movements, the Applicant screened this in as presented in Habitats Regulations Assessment - Screening Matrices (Updated) (Document Reference ExA;Screening;10.D6.5.2), submitted on 16 April 2019.
2.2.3	In response to Natural England's comments with respect to collision risk to migrant non-seabird features of the Breydon Water SPA, Broadland SPA and North Norfolk Coast SPA, the Applicant screened these SPAs into the assessment: Habitats Regulations Assessment - Screening Matrices (Updated) (Document Reference ExA;Screening;10.D6.5.2), submitted on 16 April 2019.
2.3.3	<p>The Applicant has had further discussions with Natural England regarding Norfolk Valley Fens Special Area of Conservation (SAC) and in response to Appendix 2 of the NE Statement of Common Ground (SoCG) (Clarification Note - Water Dependant Designated Sites), Natural England provided feedback on the Water Dependent Designated Sites Clarification Note through written response on 18 March 2019 which states:</p> <p><i>"Natural England agrees with the conclusion of no Likely Significant Effect to Booton Common SSSI and the Norfolk Valley Fens SAC from open cut trenching and dewatering or directional drilling based on the conceptual model and the mitigation measures, which have enabled a conclusion of low or negligible risk. Therefore we agree with the conclusions of no adverse effect on integrity."</i></p> <p>A copy of this response was provided in Appendix 2 of the Applicant's Deadline 6 submission, Onshore Ecology Clarification Notes - Position Statement (Document Reference ExA; ISH4; 10.D6.9).</p>
2.3.7 – 2.3.9	<p>The Applicant would like to draw attention to the fact that the SPA features for which assessment has been provided has been updated and now includes:</p> <ul style="list-style-type: none"> <li>• Flamborough and Filey Coast SPA gannet collision risk alone and in-combination (ExA; AS; 10.D7.21 version 2), gannet displacement risk alone and in-combination (ExA; AS; 10.D7.21 version 2), gannet combined displacement and collision risk alone and in-combination (ExA; AS; 10.D7.21 version 2), kittiwake collision risk alone and in-combination (ExA; AS; 10.D7.21 version 2), razorbill displacement risk alone and in-combination (ExA; AS; 10.D6.17 and ExA; AS; 10.D8.10), guillemot displacement risk alone and in-combination (ExA; AS; 10.D6.17 and ExA; AS; 10.D8.10), puffin displacement risk alone and in-combination (ExA; AS; 10.D6.17 and ExA; AS; 10.D8.10).</li> <li>• Alde Ore Estuary SPA lesser black-backed gull alone and in-combination collision risk (ExA; AS; 10.D7.21 version 2);</li> <li>• Greater Wash SPA red-throated diver alone and in-combination displacement risks during construction and operation (ExA; AS; 10.D6.17), little gull alone and in-combination collision risk (ExA; AS; 10.D7.21 version 2). This has updated the list of projects considered in the in-combination assessment following advice from Natural England; and,</li> <li>• Outer Thames Estuary SPA red-throated diver alone and in-combination displacement risk during operation (ExA; AS; 10.D6.17).</li> </ul>



Paragraph	Applicant's Response
2.5.1	The Applicant would like to note that the bullet points have all been discussed in detail with Natural England during the course of the Examination and that the Applicant has provided revised assessments and additional information to address all of these topics.
2.5.10	The Applicant would like to draw the ExA's attention to the fact that a further collision risk modelling revision was submitted on 14 May 2019 (between Deadline 7 and 8) (ExA; AS; 10.D7.5.2) and accepted at the discretion of the Examining Authority. This submission updated the collision risk estimates following the adoption of additional mitigation for the Project to increase the draught height by 5m (from 22m to 27m above Mean High Water Springs). This reduced the average collision risks by 41% compared with those submitted at Deadline 7 (ExA; AS; 10.D7.21), with an overall reduction in collision risk estimates of 65% since those agreed with Natural England at Deadline 6 (ExA;AS;10.D6.15).
2.5.19	As noted above, the Applicant has submitted updated collision risk modelling since the RIES was drafted (following a project revision to increase the turbine draught height by 5m, from 22m to 27m above Mean High Water Springs), which further reduces the predicted collisions by an average of 41%.
2.5.20 and 2.5.21	The Applicant would like to note that the mitigation requested by Natural England (REP7-075) and the RSPB (REP6-038, REP7-083) to raise the draught height, has now been adopted by the Project (ExA; AS; 10.D7.5.21) and that the assessments also give consideration to predictions obtained using the upper and lower 95% confidence intervals and based on adult mortality rates and adult population sizes.
2.5.23	<p>The Applicant considers that the counterfactual of population growth rate is a much more robust and informative Population Viability analysis (PVA) measure on which to base consideration of the consequences of additional mortality than the counterfactual of population size, particularly when using precautionary density independent models. The density independent models predict unlimited growth, which is widely acknowledged to be unrealistic. In the current assessment an observation that the counterfactual of population size indicates that an impacted population will be 10% smaller than the non-impacted one is interpreted by the RSPB and Natural England as a concern. However, for the population models referenced in this assessment at the levels of mortality under consideration, both the impacted and non-impacted populations show growth, albeit at different rates. After 30 years the difference in population size can therefore appear to be large, but this is due to the fact that population growth is compound and density independent populations can grow indefinitely.</p> <p>For this reason the Applicant considers that the counterfactual of population size from density dependent population projections provides much more realistic guidance. However, if density independent models are preferred then the counterfactual of population growth rate is more robust since it provides an estimate of the year on year effect which can be compared with historical observations for this metric.</p> <p>The Applicant would also like to note that the use of changes in the background mortality of up to 1% as a first step in the assessment of impacts has been used in the assessment on the advice of Natural England.</p> <p>It should be noted that the Applicant has submitted a note on uncertainty and precaution in the impact assessment at Deadline 8 (ExA; AS; 10.D8.10) which provides further illustration of how these aspects have led to over-estimation of predicted impact magnitudes.</p>
2.5.24 to 2.5.28	The Applicant followed the advice from Natural England to include impact estimates for the Hornsea Project Three and Thanet Extension wind farms, and this has been reflected in all the cumulative and in-combination assessments submitted from Deadline 6 onwards and will also be included in any future submissions.

Paragraph	Applicant's Response
2.5.45	The Applicant's initial responses regarding the requirement to agree cable protection in the Haisborough, Hammond and Winterton (HHW) SAC through the Scour Protection and Cable Protection Plan were superseded by the subsequent commitment to a HHW SAC Site Integrity Plan (SIP) as required under Condition 9(1)(m) of the Transmission Deemed Marine Licences (DMLs) (Schedules 11 and 12 of the draft DCO).
2.5.46	The Applicant and NE are in agreement that there are currently no alternative cable protection measures that can be decommissioned. The Applicant has committed to reviewing the potential for cable protection to be decommissioned should options become available, as discussed in the Outline HHW SAC SIP (document 8.20).
2.5.50	As discussed in the Applicant's Written Summary of Oral Submissions: ISH 6 – Environmental Matters submitted at Deadline 7 (document reference ExA; ISH6; 10.D7.1), the Applicant considers that cable protection can be colonised by <i>Sabellaria spinulosa</i> . The Applicant recognises that Natural England's position is that <i>S. spinulosa</i> on cable protection is not natural and therefore not an Annex 1 feature however the Applicant maintains that any reef regardless of what it is growing on would have the same effect on biodiversity, noting also that the large priority area to be managed as reef which has been identified in relation to the DEFRA joint recommendation area, extensively tracks existing pipelines. The Applicant also notes that Annex B of Natural England's Deadline 6 submission in relation to The Joint Nature Conservation Committee's and Natural England's advice to the MMO for protecting designated features in Haisborough Hammond and Winterton SCI/cSAC (document reference Rep6-032) states " <i>Sabellaria spinulosa</i> reef extent is identified along the Baird Bacton pipeline, as in the HHW SAC SAD [Selection Assessment Document] and Regulation 35 package".
2.5.52	"10% of the length of the cable corridor with the designated site" can be revised to 5% following the Applicant's commitment to reduce the length of cable protection for unburied cable in accordance with the Outline HHW SAC SIP submitted at Deadline 7.

### 3 APPLICANT'S RESPONSE ON THE RIES STAGE 1: LIKELY SIGNIFICANT EFFECTS (SECTION 3)

6. Table 2 provides the Applicant's response on Section 3 of the RIES.

**Table 2 Applicant's Response on Section 3 of the RIES**

Paragraph	Applicant's Response
Table 3.2	<p><b>Greater Wash SPA – Common scoter</b></p> <p>The potential for a LSE for common scoter due to construction disturbance in the Greater Wash SPA is identified as not agreed by the Applicant. The Applicant's justification for this is summarised below.</p> <p>The Applicant does not agree that there is risk of a LSE for common scoter in the Greater Wash SPA due to disturbance during offshore export cable installation. It should be noted that while the offshore export cable route does cross the SPA, the SPA boundary has been drawn to enclose areas of importance for several different species, each with different areas of importance. Following a request from Natural England, the distribution of common scoter in the SPA (as used in the SPA designation) was presented on a map with the export cable route (ExA; WQRApp23.1;10.D2.3). This clearly identified that the export cable route overlaps with areas of very low common scoter density (i.e. outside areas identified as important for this species) hence the risk of an LSE was excluded.</p>
Table 3.2	<p><b>Greater Wash and SPA &amp; Outer Thames Estuary SPA and pSPA extension – red-throated diver</b></p> <p>The potential for an LSE for red-throated diver due to in-combination operational disturbance in the Greater Wash SPA and Outer Thames Estuary SPA are labelled as 'unclear' in the 'LSE agreed by the Applicant' column. The Applicant would like to note that the advice from Natural England was that the impact of concern was the potential for operation and maintenance vessel movements through the SPA to cause disturbance, and that their concern would be removed through the adoption of best practice vessel operation measures. The Applicant has agreed with Natural England's requested mitigation and therefore this has removed the risk of an effect due to the project alone (and there has been no suggestion from Natural England that there could be an in-combination impact). Furthermore, the relevant mitigation measures agreed with Natural England have been secured in the dDCO (Schedule 9-10, Part 4, Condition 14(1)(d)(vi)) and are included in the updated Outline Project Environmental Management Plan (PEMP) (Document 8.14) submitted at Deadline 7. Consequently, Natural England has advised they will be able to conclude no Adverse Effects on Integrity for this aspect.</p>
Table 3.2	<p><b>Broadland SPA and Ramsar site</b></p> <p>The potential for a LSE for Broadland SPA and Ramsar site due to impacts to ex-situ habitats is identified as not agreed by the Applicant. The Applicant's justification for this is summarised below.</p> <p>The Applicant has been undertaking ongoing discussions with Natural England in relation to the potential for LSE at Broadland SPA and Ramsar site. Whilst the Applicant's position is that the wintering bird survey baseline collected in 2016/2017 is sufficient to conclude that the qualifying features of the Broadland SPA and Ramsar site are not present within functionally-linked land located within an identified study area (comprising land located both within 5km of the Broadland SPA and Ramsar site and 300m of the onshore project area), following discussions with Natural England the Applicant has agreed to manage land in such a way that should qualifying features of the Broadland SPA and Ramsar site be displaced during the works there will be suitable alternative habitat available. The Applicant and Natural England are still in discussion on the exact form of this mitigation; a summary of ongoing discussion with Natural England is provided in the Position Statement submitted at Deadline 8</p>

Paragraph	Applicant's Response
	(document reference ExA; AS; 10.D8.17) and summarised in sections 7.5 and 8.11 of this document.

#### 4 APPLICANT'S RESPONSE ON THE RIES STAGE 2: ADVERSE EFFECTS ON INTEGRITY (SECTION 4)

---

7. The Applicant notes that further details are provided in the relevant integrity matrices (Annex 3 of this RIES) and the Applicant provides responses to these in Section 8 of this document.

#### 5 APPLICANT'S RESPONSE ON THE RIES ALTERNATIVES, COMPENSATION AND IROPI (SECTION 5)

---

8. Question 1.13 of the Examining Authority's Rule 17 request for further information, issued on 21 May 2019 states:

*"The Examining Authority (ExA) understands that the Applicant's clear position at the time of ISH6, as set out in [REP7-039], is that it would not be putting forward alternatives, a case for IROPI or compensatory measures and wishes the application to be determined on the basis of the evidence submitted and the findings of the ExA which lead to an overall recommendation. Please confirm that you do not wish to put forward a fallback position in the form of alternatives/IROPI/compensatory measures even if the ExA were to conclude that there is some/limited AEOL in relation to any species/ecological interests.*

9. The Applicant has responded to this question in the Applicant's Responses to the Examining Authority's Rule 17 Requests for Further Information (Document Reference: ExA; WQ; 10.D8.16).

#### 6 APPLICANT'S RESPONSE ON ANNEX 1 OF THE RIES

---

10. The Applicant agrees with Annex 1 of the RIES and has no further comments.

## 7 APPLICANT'S RESPONSE ON ANNEX 2 OF THE RIES

11. Question 1.8 of the Examining Authority's Rule 17 request for further information, issued on 21 May 2019 states:

*"Please comment on the areas that contain question marks, i.e. where there is not agreement between the Interested Parties and the Applicant that LSE and/or an AEOI can be excluded, as set out in Annexes 2 and 3 of the Report on the Implications for European Sites (RIES) [PD-016]."*

12. Sections 7.1 to 7.7 provide the Applicant's comments on Annex 2 of the RIES including the Applicant's response to those areas that contain question marks in the RIES.

### 7.1 Flamborough and Filey Coast SPA

Table 3 Applicant's Response on Screening Matrix 1

Note Ref.	Applicant's Response
a	<b>Kittiwake - Collision mortality</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Kittiwake - Displacement/disturbance/barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>All features - In-combination effects (construction and decommissioning)</b>
	The Applicant agrees with the notes provided and has no further comments.
d	<b>Gannet - Collision mortality</b>
	The Applicant agrees with the notes provided and has no further comments.
e	<b>Gannet - Construction and decommissioning displacement/disturbance</b>
	The Applicant agrees with the notes provided and has no further comments.
f	<b>Gannet - Operational displacement</b>
	The Applicant agrees with the notes provided and has no further comments.
g	<b>Gannet - Barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
h	<b>Gannet - In-combination displacement</b>
	The Applicant can confirm that in-combination displacement for gannet has been screened in to the assessment and this has been assessed in the Applicant's submission on 14 May 2019 (between Deadline 7 and 8) (ExA; AS; 10.D.7.21 version 2).
i	<b>Guillemot, razorbill and puffin - Collision mortality</b>
	The Applicant agrees with the notes provided and has no further comments.
j	<b>Guillemot, razorbill and puffin - Construction and decommissioning displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
k	<b>Guillemot, razorbill and puffin - Operational displacement/disturbance</b>
	The Applicant agrees with the notes provided and has no further comments.
l	<b>Guillemot, razorbill and puffin - Operational barrier effects</b>

Note Ref.	Applicant's Response
	The Applicant agrees with the notes provided and has no further comments.
m	<b>Guillemot, razorbill and puffin - In-combination operational displacement</b>
	The Applicant can confirm that in-combination displacement for razorbill and guillemot has been screened in to the assessment and this has been assessed in the Applicant's submission at Deadline 6 (ExA; AS; 10.D.6.17).
n	<b>Seabird assemblage</b>
	The Applicant can confirm that project alone and in-combination displacement for puffin has been screened in to the assessment and this has been assessed in the Applicant's submission at Deadline 6 (ExA; AS; 10.D.6.17) and updated at Deadline 8 (ExA; AS; 10.D8.10).

## 7.2 Greater Wash SPA

**Table 4 Applicant's Response on Screening Matrix 2 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Little tern, common tern and sandwich tern - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Red-Throated Divers (RTDs) - Collision mortality and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>RTDs - Construction disturbance/displacement</b>
	The Applicant agrees with the notes provided and has no further comments.
d	<b>RTDs - Operational disturbance/displacement</b>
	The Applicant would like to draw attention to the fact that the comments attributed to Natural England with respect to the use of the correct abundance estimates for Norfolk Vanguard West (i.e. to base this on all birds present, not just those on the water; RR-106), were not made in relation to assessment for the Greater Wash SPA but rather the Environmental Impact Assessment. In agreement with Natural England, displacement of red-throated diver from the wind farm sites themselves was screened out of the assessment for this SPA. Only the potential for disturbance due to operation and maintenance vessel movements across the SPA has been screened in.
e	<b>RTDs - Decommissioning disturbance/displacement</b>
	The Applicant agrees with the notes provided and has no further comments.
f	<b>Little gull - Collision mortality</b>
	The Applicant agrees with the notes provided and has no further comments.
g	<b>Little gull - Disturbance/displacement</b>
	The Applicant agrees with the notes provided and has no further comments.
h	<b>Common scoter - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
i (?)	<b>Common scoter - Disturbance/displacement</b>
	The Applicant accepts the ExA's position regarding screening of common scoter. Comments on the Greater Wash SPA Integrity Matrix are provided in Section 8.3.
j	<b>All features - In-combination effects</b>

Note Ref.	Applicant's Response
	The Applicant agrees with the notes provided and has no further comments.

### 7.3 Outer Thames Estuary SPA and pSPA

Table 5 Applicant's Response on Matrix 3

Note Ref.	Applicant's Response
a	<b>RTDs - Collision mortality and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>RTDs - Construction displacement/disturbance</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>RTDs - Operational displacement/disturbance</b>
	The Applicant can confirm that Project alone displacement due to vessel movements for red-throated diver has been screened in to the assessment and this has been assessed in the Applicant's submission at Deadline 6 (ExA; AS; 10.D.6.17).
d	<b>RTDs - Decommissioning displacement/disturbance</b>
	The Applicant agrees with the notes provided and has no further comments.
e	<b>RTDs - In-combination effects</b>
	The Applicant agrees with the notes provided and has no further comments.
f	<b>Little tern and common tern - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.

### 7.4 Norfolk Valley Fens SAC

Table 6 Applicant's Response on Screening Matrix 4 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)

Note Ref.	Applicant's Response
	<b>Northern Atlantic wet heaths with <i>Erica tetralix</i>, European dry heaths, Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>), calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>, alkaline fens and alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) -</b>
a	<b>Direct impacts on features within 5km</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Impacts on the features of the Norfolk Valley Fens SAC beyond 5km of the onshore project area</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>Impacts on ex-situ habitats functionally connected to the SAC</b>
	The Applicant agrees with the notes provided and has no further comments.
d	<b>Disturbance due to groundwater/hydrology and air quality changes</b>
	The Applicant agrees with the notes provided and has no further comments.
e	<b>Effects from noise, visual or light disturbance</b>
	The Applicant agrees with the notes provided and has no further comments.



Note Ref.	Applicant's Response
f	<b>In-combination effects</b>
	The Applicant agrees with the notes provided and has no further comments.
g (?)	<b>Semi-natural dry grasslands and scrubland facies on calcareous substrates, narrow mouthed whorl snail and Desmoulin's whorl snail</b>
	The Applicant notes that the ExA has screened in <i>semi-natural dry grasslands and scrubland facies on calcareous substrates, narrow mouthed whorl snail and Desmoulin's whorl snail</i> following Natural England's response in their relevant representation that they require further information regarding the water supply mechanism for all component SSSI of Norfolk Valley Fens located within 5km of the onshore project area. The Applicant accepts inclusion of this within the integrity matrices on this basis.

## 7.5 Broadland SPA and Ramsar

**Table 7 Applicant's Response on Screening Matrix 5 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Bewick's swan, whooper swan, gadwall, northern shoveler, ruff, bittern and hen harrier - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Marsh harrier - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>All SPA features - Collision mortality (alone and in-combination)</b>
	The Applicant agrees with the notes provided and has no further comments.
d (?)	<b>All SPA features and Ramsar Criterion 2 - Ex-situ habitats</b>
	The Applicant has engaged in ongoing discussions with Natural England in relation to the potential for LSE at Broadland SPA and Ramsar site. Further information is provided on the culmination of these discussion under the integrity matrices (section 8.11). The Applicant accepts the ExA position that SPA qualifying and Ramsar criterion 2 bird species are screened in, but notes that only the qualifying swan and geese species of the SPA and Ramsar site (pink footed goose ( <i>Anser brachyrhynchus</i> ), white-fronted goose ( <i>Anser albifrons</i> ), greylag goose ( <i>Anser anser</i> ), Bewick's swan ( <i>Cygnus columbianus bewickii</i> ), whooper swan ( <i>Cygnus Cygnus</i> ) and bean goose ( <i>Anser fabalis</i> ) utilise the relevant ex-situ habitats (i.e. crop stubble and improved grassland pasture) which are present within the study area, and therefore not all qualifying species should be screened in.
e	<b>All SPA features and Ramsar Criterion 2 - In-situ habitats</b>
	The Applicant agrees with the notes provided and has no further comments.
f	<b>All SPA features and Ramsar Criterion 2 - In-combination effects displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments, although notes that this note should refer to 'Broadland SPA' rather than 'Breydon SPA'.
g (?)	<b>Ramsar Criterion 6 - Collision mortality, displacement/disturbance, barrier effects</b>
	The Applicant accepts the ExA's position regarding the Ramsar criterion. Comments on the Broadland SPA and Ramsar Integrity Matrix are provided in Section 8.11.

## 7.6 Breydon Water SPA and Ramsar Site

**Table 8 Applicant's Response on Screening Matrix 6 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Common tern - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Avocet, Bewick's swan, golden plover, assemblage qualification - Collision mortality (alone and in-combination)</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>Avocet, Bewick's swan, golden plover, assemblage qualification - Displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
d	<b>Avocet, Bewick's swan, golden plover, assemblage qualification - In-combination effects displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
e (?)	<b>Ramsar Criterion 5 and Ramsar Criterion 6 - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant accepts the ExA's position regarding the Ramsar criterion. Comments on the Breydon Water SPA and Ramsar Integrity Matrix are provided in Section 8.12.

## 7.7 North Norfolk Coast SPA and Ramsar Site

**Table 9 Applicant's Response on Screening Matrix 7 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Wigeon, pink-footed goose, Brent goose, knot, avocet - Collision mortality (alone and in-combination)</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Wigeon, pink-footed goose, Brent goose, knot, avocet - Displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>Little tern, common tern and sandwich tern - Collision mortality, displacement/disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.
d	<b>All features - In-combination effects</b>
	The Applicant agrees with the notes provided and has no further comments.
e (?)	<b>Montagu's harrier</b>
	The Applicant agrees with the notes provided. Comments on the North Norfolk Coast SPA and Ramsar Integrity Matrix are provided in Section 8.13.
f (?)	<b>Ramsar Criteria 5 And 6</b>

Note Ref.	Applicant's Response
-----------	----------------------

	The Applicant accepts the ExA's position regarding the Ramsar criterion. Comments on the North Norfolk Coast SPA and Ramsar Integrity Matrix are provided in Section 8.13.
--	--

## 8 APPLICANT'S RESPONSE ON ANNEX 3 OF THE RIES

13. As discussed in Section 7, Question 1.8 of the Examining Authority's Rule 17 request for further information states:

*Please comment on the areas that contain question marks, i.e. where there is not agreement between the Interested Parties and the Applicant that LSE and/or an AEOI can be excluded, as set out in Annexes 2 and 3 of the Report on the Implications for European Sites (RIES) [PD-016].*

14. Sections 8.1 to 8.13 provide the Applicant's comments on Annex 3 of the RIES including the Applicant's response to those areas that contain question marks in the RIES.

### 8.1 Alde-Ore Estuary SPA and Ramsar

**Table 10 Applicant's Response on Integrity Matrix 1 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a (?)	<b>Lesser black-backed gull collision mortality</b>
	The Applicant agrees with the notes provided, however would also like to highlight that collision risk has been further reduced for the Project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Alde Ore Estuary SPA were provided at Deadline 7 in ExA;AS;10.D7.21.Version2.
b (?)	<b>Lesser black-backed gull in-combination collision mortality</b>
	The Applicant agrees with the notes provided, however would also like to highlight that collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Alde Ore Estuary SPA were provided at Deadline 7 in ExA;AS;10.D7.21.Version2.
c	<b>Predator management</b>
	The Applicant agrees with the notes provided, however would also like to note that the reference to offsetting of in-combination impacts through predator control has now been removed (ExA;AS;10.D7.21.Version2).

## 8.2 Flamborough and Filey Coast SPA

**Table 11 Applicant's Response on Integrity Matrix 2 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Kittiwake collision mortality</b>
	The Applicant agrees with the notes provided, however would also like to highlight that the collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Flamborough and Filey Coast SPA have been provided in ExA;AS;10.D7.21.Version2.
b (?)	<b>Kittiwake in-combination collision mortality</b>
	The Applicant agrees with the notes provided, however would also like to highlight that the collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Flamborough and Filey Coast SPA have been provided in ExA;AS;10.D7.21.Version2.
c (?)	<b>Gannet collision mortality</b>
	The Applicant agrees with the notes provided, however would also like to highlight that the collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Flamborough and Filey Coast SPA have been provided in ExA;AS;10.D7.21.Version2.
d (?)	<b>Gannet operational displacement</b>
	The Applicant agrees with the notes provided, however would also like to highlight that although assessment using the upper 95% confidence limit on density for Norfolk Vanguard has not been provided, it is the Applicant's position that this would not materially affect the conclusions. This is based on the fact that in order for the assessed increase in mortality to exceed 1% (the accepted threshold for detectability) the magnitude of predicted impact would need to be 25 times higher (than the 0.04% assessed using the summed mean abundances), while the upper 95% confidence estimate of population abundance is only 1.6 times higher than mean abundance.
e (?)	<b>Gannet in-combination collision mortality</b>
	The Applicant agrees with the notes provided, however would also like to highlight that the collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Flamborough and Filey Coast SPA have been provided in ExA;AS;10.D7.21.Version2.
f (?)	<b>Gannet in-combination operational displacement</b>
	The Applicant considers that Natural England's apparent concern on this topic (REP7-075) is actually due to their position on collision risk (when considered together with displacement risk) and not the displacement assessment itself (on which Natural England and the Applicant are in agreement: see paragraph 2.2.9 of REP7-075).
g (?)	<b>Gannet Combined operational collision and displacement mortality (from the project alone)</b>
	The Applicant agrees with the notes provided, however would also like to highlight that the collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Flamborough and Filey Coast SPA have been provided in ExA;AS;10.D7.21.Version2. The Applicant also considers the comment to point (d) above is relevant to this aspect.

Note Ref.	Applicant's Response
h (?)	<b>Gannet Combined operational collision and displacement mortality (in-combination with other plans or projects)</b>
	The Applicant agrees with the notes provided, however would also like to highlight that the collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Flamborough and Filey Coast SPA have been provided in ExA;AS;10.D7.21.Version2. This also included an updated assessment of combined collision and displacement impacts.
i (?)	<b>Gannet and kittiwake collision mortality: nocturnal activity factors</b>
	The Applicant agrees with the notes provided, however would also like to highlight that the collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Flamborough and Filey Coast SPA have been provided in ExA;AS;10.D7.21.Version2.
j (?)	<b>In-combination collision mortality</b>
	The Applicant agrees with the notes provided and would just add that these projects were also included in the updated collision assessment submitted between Deadlines 7 and 8 (ExA; AS; 10.D7.21).
k	<b>Guillemot operational phase displacement</b>
	The Applicant agrees with the notes provided, however would also like to highlight that an updated assessment following Natural England's advised methods provided at Deadline 7 (REP7-075) has been submitted at Deadline 8 (ExA; AS; 10.D8.10). The conclusions of the revised assessment are unchanged, with no Adverse Effects on Integrity predicted due to displacement from the Project alone.
l (?)	<b>Guillemot in-combination operational phase displacement</b>
	The Applicant agrees with the notes provided, but would like to draw attention to the fact that updated assessment following Natural England's advised methods provided at Deadline 7 (REP7-075) has been submitted at Deadline 8 (ExA; AS; 10.D8.10). The conclusions of the revised assessment are unchanged, with no Adverse Effects on Integrity predicted due to displacement from the Project in-combination with other wind farms.
m (?)	<b>Razorbill operational phase displacement</b>
	The Applicant agrees with the notes provided, however would also like to highlight that updated assessment following Natural England's advised methods provided at Deadline 7 (REP7-075) has been submitted at Deadline 8 (ExA; AS; 10.D8.10 ). The conclusions of the revised assessment are unchanged, with no Adverse Effects on Integrity predicted due to displacement from the Project alone.
n (?)	<b>Razorbill in-combination operational phase displacement</b>
	The Applicant agrees with the notes provided, however would also like to highlight that updated assessment following Natural England's advised methods provided at Deadline 7 (REP7-075) has been submitted at Deadline 8 (ExA; AS; 10.D8.10 ). The conclusions of the revised assessment are unchanged, with no Adverse Effects on Integrity predicted due to displacement from the Project in-combination with other wind farms.
o (?)	<b>Seabird assemblage</b>
	The Applicant agrees with the notes provided and has no further comments.
p	<b>Puffin operational phase displacement</b>

Note Ref.	Applicant's Response
	The Applicant agrees with the notes provided, however would also like to highlight that updated assessment following Natural England's advised methods provided at Deadline 7 (REP7-075) has been submitted at Deadline 8 (ExA; AS; 10.D8.10). The conclusions of the revised assessment are unchanged, with no Adverse Effects on Integrity predicted due to displacement from the Project alone.
q (?)	<b>Puffin in-combination operational phase displacement</b>
	The Applicant agrees with the notes provided, however would also like to highlight that updated assessment following Natural England's advised methods provided at Deadline 7 (REP7-075) has been submitted at Deadline 8 (ExA; AS; 10.D8.10). The conclusions of the revised assessment are unchanged, with no Adverse Effects on Integrity predicted due to displacement from the Project in-combination with other wind farms.
r (?)	<b>Guillemot, razorbill and puffin operational phase displacement</b>
	The approach advised by Natural England (REP7-075) has been used in the updated displacement assessment submitted at Deadline 8 (ExA; AS; 10.D8.10).

### 8.3 Greater Wash SPA

**Table 12 Applicant's Response on Integrity Matrix 3 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a (?)	<b>Red-throated diver construction phase displacement/disturbance.</b>
	The Applicant agrees with the notes provided however would also like to draw attention to the fact that the Applicant has reviewed the construction programme and in order to address Natural England's concerns has committed that, should it be necessary to install the offshore export cable through the Greater Wash SPA between January and March inclusive, this will involve only one main cable laying vessel at any one time; this would halve the magnitude of any potential displacement. This would reduce the worst case impact estimated using Natural England's advised rates to an increase in background mortality of 0.65% to 1.3% and using the evidence based rates to 0.05% to 0.12%, and in all cases this would be a one-off impact in a single winter. The Applicant considers that this further supports a conclusion of no Adverse Effect on Integrity as a result of export cable installation through the SPA.  This commitment has been included in Condition 18, Part 4 of Schedule 11-12 (Transmission DMLs) of the dDCO submitted at Deadline 8.
b (?)	<b>Red-throated diver operational displacement/disturbance</b>
	The Applicant agrees with the notes provided and would like to draw the Examining Authority's attention to the updated Outline PEMP (document 8.14) , submitted at Deadline 7 and secured in the dDCO (Schedule 9-10, Part 4,condition 14(1)(d)(vi)), which includes these measures.
c	<b>Red-throated diver in-combination displacement/disturbance</b>
	The Applicant agrees with the notes provided and has no further comments.
d (?)	<b>Red-throated diver in-combination construction phase displacement/disturbance</b>

Note Ref.	Applicant's Response
	The Applicant notes the comments made by Natural England (RR-106) that operational wind farms in the SPA should be included in the Norfolk Vanguard in-combination assessment of cable installation. However, the Applicant considers that combining impacts from Norfolk Vanguard (a maximum six-week construction period of minimal disturbance due to effectively stationary vessels, which furthermore will likely not occur during winter due to weather conditions) with those for operational wind farms which will last for the duration of those projects as proposed by Natural England is highly inappropriate. The potential effects from these two sources of disturbance (cable installation and operational wind farm displacement) are on very different temporal (6 weeks vs. up to 25 years) and spatial scales (wind farms plus buffers within the SPA cover an area in excess of 10 times that of the zone around a cable laying vessel). Therefore, for these reasons the Applicant considers this requested assessment to be unnecessary and inappropriate. The Applicant also notes that to the best of their knowledge this has not been required of any previous offshore wind farm application. The Applicant would also like to note that, following further consideration of the construction programme, although export cable installation is not planned to occur during the winter, should installation of the export cable through the SPA be unavoidable during the most sensitive period for red-throated diver (January to March inclusive), such work will involve only one main cable laying vessel (the previous worst case assumed there could be up to two vessels). This commitment has been included in Condition 18, Part 4 of Schedule 11-12 (Transmission DMLs) of the dDCO submitted at Deadline 8.
e (?)	<b>Red-throated diver in-combination operational phase displacement/disturbance</b>
	The Applicant agrees with the notes provided, however would also like to draw attention to the fact that Natural England has not requested assessment of displacement due to the presence of turbines from the operational Norfolk Vanguard Wind Farm site for the Project alone or in-combination with respect to the Greater Wash SPA. The operational phase assessment has only been required to assess operation and maintenance vessel movements across the SPA itself. The concerns that Natural England raised in this respect have been addressed through an agreement from the Applicant to follow best practice vessel operation measures, and these have been secured in the dDCO (Schedule 9-10, Part 4, condition 14(1)(d)(vi)) and are included in the updated Outline PEMP (document 8.14), submitted at Deadline 7.
f	<b>Little gull collision mortality</b>
	The Applicant agrees with the notes provided and has no further comments.
g (?)	<b>Little gull in-combination collision mortality</b>
	The Applicant agrees with the notes provided, however would also like to highlight that collision risk has been further reduced for the project following a commitment to raise the draught height by 5m (from 22m to 27m above Mean High Water Springs). The updated collision predictions and assessment of impact on the Greater Wash SPA have been provided in ExA;AS;10.D7.21.Version2.
h (?)	<b>Common scoter disturbance/displacement</b>
	The Applicant agrees with the notes provided. The Applicant maintains the position that as the offshore cable route does not overlap with any concentrations of common scoter there would be no LSE and therefore no further assessment has been undertaken.
i (?)	<b>Common scoter in-combination disturbance/displacement</b>
	The Applicant agrees with the notes provided and has no further comments.



## 8.4 Outer Thames Estuary SPA

**Table 13 Applicant’s Response on Integrity Matrix 4 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant’s Response
a (?)	<b>Red-throated diver operational phase displacement/disturbance</b>
	The Applicant agrees with the notes provided and would like to draw the Examining Authority’s attention to the updated Outline PEMP (document 8.14), submitted at Deadline 7 and secured in the dDCO (Schedule 9-10, Part 4, condition 14(1)(d)(vi)), which includes these measures.
b (?)	<b>Red-throated in-combination diver operational displacement/disturbance</b>
	The Applicant agrees with the notes provided, however would also like to draw attention to the fact that Natural England has not requested assessment of displacement due to the presence of turbines from the operational Norfolk Vanguard Wind Farm site for the Project alone or in-combination with respect to the Greater Wash SPA. The operational phase assessment has only been required to assess operation and maintenance vessel movements across the SPA itself. The concerns that Natural England raised in this respect have been addressed through an agreement from the Applicant to follow best practice vessel operation measures, and these have been secured in the dDCO (Schedule 9-10, Part 4, condition 14(1)(d)(vi)) and are included in the updated Outline PEMP (document 8.14), submitted at Deadline 7.

## 8.5 Haisborough Hammond and Winterton SAC

**Table 14 Applicant’s Response on Integrity Matrix 5 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant’s Response
a (?)	<b>Sandbanks – temporary physical disturbance (construction)</b>
	<p>The Applicant maintains that there would be no adverse effect on the form and function of the Sandbanks as a result of the temporary construction works, including sandwave levelling and sediment disposal, based on the worst case scenario assessed in the Information to Support HRA Report (document 5.3).</p> <p>In addition, the Applicant has committed to a HHW SAC SIP which provides a framework to agree the installation methods and any sediment disposal method and locations with the MMO, in consultation with Natural England. A SIP approach enables the effects and mitigation to be considered further prior to construction based on the best available information, recognising Natural England’s concerns regarding a current lack of available empirical evidence.</p> <p>The Applicant notes the separate subsections on “Sandwave levelling” and “Dredging”, however these are the same aspect of the construction process as the only dredging that is proposed is in relation to sandwave levelling.</p>
b (?)	<b>Sandbanks – temporary physical disturbance (operation)</b>
	The Applicant agrees with the notes provided and highlights that the potential requirement for cable reburial during the operation and maintenance (O&M) phase of the Project is likely to be dependent on the installation strategy adopted (i.e. whether sandwave levelling/pre-sweeping is used to bury the cables within the stable reference seabed level, therefore reducing the likelihood that reburial will be required during O&M). The Applicant has assessed a worst case scenario for O&M reburial on the basis that pre-sweeping is not undertaken and maintains the position that the

Note Ref.	Applicant's Response
	<p>temporary nature and relatively small scale of any maintenance works would not affect the form and function of the sandbank system as recovery is expected, as with construction.</p> <p>However, the Applicant has also committed to the HHW SAC SIP which provides a framework to agree the installation methods with the MMO in consultation with Natural England based on the best available information and empirical evidence prior to construction. This will take into account available evidence associated with the long term benefits of using pre-sweeping during the installation phase (as discussed in Section 5.3 of the Outline HHW SAC SIP, document reference 8.20).</p>
c	<p><b>Sandbanks – Introduction of new substrate</b></p> <p>The Applicant agrees with the notes provided and highlights that the revised footprints stated in the ExA's note are as a result of the commitment made by the Applicant to reduce the maximum potential cable protection for unburied cables from 10% to 5% of the length of cable within the HHW SAC, following discussions with Natural England and the commissioning of an Interim Cable Burial Study by the Applicant during the Examination.</p>
d (?)	<p><b>Sandbanks – In-combination effects</b></p> <p>The worst case total area of cable protection installed within the SAC could be up to 0.084km<sup>2</sup> for Norfolk Vanguard and Norfolk Boreas based on the following:</p> <ul style="list-style-type: none"> <li>• 0.00002km<sup>2</sup> of clump weights based on cutting two existing dis-used cables and placing clump weights of up to 5m<sup>2</sup> on either end of the dis-used cables (would be cut once to allow for both projects);</li> <li>• Six crossings for each of the four cable pairs (two per project) within the SAC with a total footprint of 24,000m<sup>2</sup> (0.024km<sup>2</sup>) (100m length and 10m width of protection); and</li> <li>• A contingency of up to 2km of cable protection per cable pair for Norfolk Vanguard and 4km per cable pair for Norfolk Boreas, resulting in a footprint of 60,000m<sup>2</sup> (5m width of cable protection).</li> </ul> <p>Based on this worst case scenario, the total permanent footprint on sandbanks equates to less than 0.006% of the total area of the SAC (1,468km<sup>2</sup>) and 0.013% of the area of sandbanks within the SAC (669km<sup>2</sup>).</p> <p>Due to the patterns of erosion, accretion and movement of sand waves naturally occurring within the offshore cable corridor (discussed in Appendix 7.1 of the Information to Support HRA report) it is expected that the cable protection may undergo some periodic burial and uncovering and therefore there would be no adverse effect on the form and function of the Sandbanks.</p> <p>The deployment of cable protection must be agreed with the MMO in consultation with Natural England through the HHW SAC SIP, in accordance with the Outline HHW SAC SIP (document 8.20). The wording of Condition 9(1)(m) of the Transmission DMLs allows a conclusion of no AEoI to be made at the consenting stage, as it ensures that works cannot commence in the HHW SAC until the MMO is satisfied that there would be no AEoI.</p>
e (?)	<p><b>Reef and Sandbanks – Decommissioning</b></p> <p>The Applicant agrees with the notes provided and has no further comments.</p>
f (?)	<p><b>Reef and Sandbanks – Habitat loss (operation)</b></p> <p>Contrary to what is stated in note 'f' of the RIES, the revised integrity matrices submitted at Deadline 7 include consideration of habitat loss of Reef. Note 'd' of the Integrity matrices states that the worst case scenario footprint of cable protection equates to 0.03km<sup>2</sup> (0.002% of the total area of the SAC and 0.004% of the area of sandbanks within the SAC).</p> <p>The location and extent of <i>S. spinulosa</i> reef, and therefore the overlap of the permanent infrastructure (i.e. cable protection) with reef feature, is unknown at this stage due to the ephemeral nature of the species, this will therefore be detailed in the final HHW SAC SIP based on the findings of the pre-construction surveys, in accordance with the Outline HHW SAC SIP (document 8.20).</p>

Note Ref.	Applicant's Response
	<i>S. spinulosa</i> can be expected to colonise cable protection and therefore the Applicant considers that there would be no loss of reef habitat. The Applicant recognises that Natural England does not consider this to be Annex 1 reef, however as stated in note 'k' of the RIES, the large area to be managed as reef within the DEFRA byelaw area extensively tracks existing pipelines and <i>S. spinulosa</i> is found on an existing pipeline within the SAC according to Natural England's Deadline 6 submission. Norfolk Vanguard Limited therefore maintains that any reef, regardless of what it is growing on, would have the same value in the HHW SAC.
g (?)	<b>Reef and Sandbanks – Habitat loss (decommissioning)</b> As habitat loss has been assessed as a permanent effect, the Applicant considers that it would be double counting to assess this impact more than once. Habitat loss has therefore been assessed in the operation section of the Information to Support HRA report and in the Integrity Matrices. It should be noted that the Sweetman I case law (C258/11 para 46) only specifically refers to permanent loss of priority natural habitat, which Article 1(d) of the Habitats Directive defines as 'natural habitat types in danger of disappearance' (Ibid, para 42), which is not applicable in this case as Annex 1 Sandbank and Annex 1 Reef are not priority natural habitats. In addition, Waddenzee case law states (C-127/02 para 47) that a project which is not likely to undermine the site's nature conservation objectives cannot be considered to have an adverse effect on site integrity. The small proportion of cable protection proposed for Norfolk Vanguard would not interfere with the physical processes of the sandbanks or adversely affect the communities of the sandbank which are of low diversity and as discussed above <i>S. spinulosa</i> can be expected to colonise cable protection, therefore there would be no AEol.
h (?)	<b>Reef and Sandbanks – Site Integrity Plan</b> A conference call was held between the Applicant, Natural England and the MMO on the 21st May 2019 to discuss feedback on the updated version of the Outline HHW SAC SIP that was submitted at Deadline 7. The Applicant understands that the use of a SIP approach is now accepted and the Outline HHW SAC SIP submitted at Deadline 7 has been welcomed by Natural England and the MMO, subject to minor comments that are expected to be submitted by both parties at Deadline 8. In correction to note 'h' of the RIES, Hornsea Project Two did not use a Site Integrity Plan. The Consideration of the Purpose of the HHW SAC SIP (document reference ExA; AS; 10.D7.19) submitted at Deadline 7 provides a review of the Hornsea Project Two approach along with the SIP approach adopted for the consented East Anglia THREE project in relation to the Southern North Sea SAC and the SIP approach proposed for Norfolk Vanguard in relation to the HHW SAC.
i (?)	<b>Reef – temporary physical disturbance (construction)</b> <u>Baseline</u> The Applicant agrees with the notes provided regarding the baseline and has no further comments. <u>Reef avoidance micrositing</u> The Applicant agrees with the notes provided regarding the baseline and has no further comments. <u>Reef recovery</u> The evidence provided in the Information to Support HRA report includes references regarding the recoverability of reef and individuals. In addition, the Thanet wind farm post construction surveys in 2012 found a wider distribution of <i>S. spinulosa</i> aggregation categorised as moderate (patchy) growth and dense growth as compared with pre-construction surveys. The 2012 surveys also found less signs of damage (e.g. rubble and scars) to the <i>S. spinulosa</i> aggregations where recorded, when compared with earlier surveys, however this was partially attributed to the reduction in destructive bottom fishing activities as a result of the presence of the offshore wind farm and associated cable infrastructure (Royal HaskoningDHV, 2016a). Although a small decline of <i>S. spinulosa</i> reef was observed shortly after Thanet Offshore Wind Farm was constructed, five years after construction those reef structures were found to be recovering (van Duren et al., 2017).

Note Ref.	Applicant's Response
	<p><u>Restore conservation objective – avoiding areas of future reef</u></p> <p>The Applicant agrees with the notes provided and has no further comments.</p> <p><u>SIP</u></p> <p>The Applicant agrees with the notes provided and has no further comments.</p>
j (?)	<p><b>Reef – temporary physical disturbance (operation)</b></p> <p>The Applicant agrees with the notes provided, however it is noted that if reburial is required, it is likely that this would be in sections of approximately 1km at any one time with a disturbance width of approximately 10m.</p> <p>Sections of cable repair are estimated to be approximately 300m in length with a disturbance width of approximately 10m.</p> <p>These equate to less than 0.001% of the total SAC area (1,468km<sup>2</sup>) at any one time and recovery is expected to commence following the completion of each maintenance activity. The Applicant maintains that this would have no AEol of the HHW SAC.</p> <p>In addition, Section 5.6 of the HHW SAC SIP outlines the process for agreeing maintenance activities with the MMO in consultation with Natural England to ensure there is no AEol.</p>
k (?)	<p><b>Reef – New substrate</b></p> <p>The Applicant agrees with the summary provided and reiterates that the Applicant disagrees with Natural England's statement that "<i>deposition of material or other alteration of surface sediment are likely to lead to a persistent change to substrate which is not a suitable habitat for mixed sediment Annex I reef communities</i>". Gibb <i>et al.</i> (2014) state that <i>S. spinulosa</i> reef is considered to be 'Not Sensitive' to a habitat change which results in increased coarseness as the resulting habitat is suitable for the species. Van Duren <i>et al.</i> (2017) found that substrate is not the critical factor for <i>S. spinulosa</i> recruitment. They concluded that if there was some hard substrate present for initial settlement, <i>S. spinulosa</i> could establish the reef structure and spread across soft substrate. Due to this low sensitivity to substrate type, <i>S. spinulosa</i> is often one of the first species to settle on newly exposed and suitable surfaces (OSPAR Commission, 2010).</p>
l (?)	<p><b>Reef – Increased suspended sediment and smothering (construction)</b></p> <p>The Applicant agrees with the notes provided and has no further comments.</p>
m (?)	<p><b>Reef – In-combination effects (construction)</b></p> <p>The Applicant notes that the 7.4% temporary reef disturbance stated in the Information to Support HRA report is a hypothetical and unlikely worst case scenario requested by Natural England during the Evidence Plan Process which reflects reef extending across the full width of the offshore cable corridor but nowhere else beyond the corridor. In reality, in the unlikely event that reef has extended across the cable corridor, this would likely be a section of a much larger reef area e.g. the 'area to be managed as reef' which underpins the DEFRA joint recommendation area and therefore the proportion of temporary disturbance would be significantly smaller.</p> <p>With regards to the 2,400,000m<sup>3</sup> of sediment which could be disturbed as a result of trenching, this would not be lifted and is therefore not subject to disposal. The Applicant corrected this in the Site Characterisation Report (Revision 2) (document reference 8.15) submitted at Deadline 2.</p>
n (?)	<p><b>Reef – In-combination effects (operation)</b></p> <p>The Applicant maintains the position that <i>S. spinulosa</i> reef can colonise cable protection and would have the same benefits on artificial substrate as on natural substrate and therefore there would be no loss of reef, either alone or in-combination, however the Applicant recognises that Natural England does not consider this to be Annex 1 reef and has committed to agreeing cable protection deployment with the MMO, in consultation with Natural England through the HHW SAC SIP. The worst case scenario footprint for in-combination cable protection is as provided in response to note 'd' above.</p>

## 8.6 Southern North Sea SAC

**Table 15 Applicant's Response on Integrity Matrix 6 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Auditory Injury (construction)</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Disturbance from underwater noise (construction)</b>
	It should be noted that the estimates of 10% of the winter area and 9.4% of the summer area of the Southern North Sea (SNS) Special Area of Conservation (SAC) includes highly conservative assumptions relating to all construction activities. For pile driving, a worst case scenario was considered based on 8% of the summer and winter areas based on the maximum potential overlap, however the average potential overlap would be 4% of the winter area and 7% of the summer area. For other aspects of potential disturbance (e.g. due to vessel activity) an assumption was made that harbour porpoise could be disturbed within the entire offshore wind farm sites, whereas in reality disturbance is likely to be more localised around the areas of activity.
c (?)	<b>Auditory injury and disturbance (construction)</b>
	<p><u>Mitigation measures</u></p> <p>Natural England's response to First Written Question 23.22 stated:</p> <ul style="list-style-type: none"> <li>• <i>"The proposed measures set out within the draft SIP [In Principle Site Integrity Plan, document 8.17] include alternate foundation methodologies, noise mitigation systems, scheduling of pile driving and other relevant technologies or methodologies that may emerge in the future. These are all the sorts of measures that we [NE] refer to in our advice above (23.10)"</i></li> <li>• <i>"There has not yet been a need to adopt these measures in windfarm construction to date therefore they have not been proven to be deliverable"</i></li> </ul> <p>It is therefore not possible for the Applicant to provide further evidence at this stage. The SIP approach that has been adopted by the Applicant provides a framework for agreeing mitigation measures with the MMO prior to construction, based on the best available information at that time.</p> <p><u>Noise thresholds/limits</u></p> <p>In addition to the summary provided in note 'c', Natural England's response to The Wildlife Trust's issues with the SNCB guidance on noise management at Deadline 4 [REP4-062] states:</p> <p><i>"This management approach has been agreed by the SNCBs and been used by the Regulator in Habitats Regulations Assessments and within the current Review of Consents. Natural England has no further comment at this time, other than we are happy with its use in this assessment.</i></p> <p><i>The SNCB's are open to investigating alternative management approaches, but to date none have been provided. The SNCB's also acknowledge further scientific evidence may become available in the future, which may warrant the thresholds being reviewed and amended as appropriate. But this is unlikely to happen in the near future and definitely not within the timeframes of this examination."</i></p>
d	<b>Operation and maintenance impacts</b>
	The Applicant agrees with the notes provided and has no further comments.
e	<b>Disturbance from underwater noise (operation)</b>
	The Applicant agrees with the notes provided and has no further comments.
f	<b>Decommissioning impacts</b>
	The Applicant agrees with the notes provided and has no further comments.
g	<b>Disturbance from vessels</b>

Note Ref.	Applicant's Response
	The Applicant agrees with the notes provided and has no further comments.
h	<b>Collision mortality</b>
	The Applicant agrees with the notes provided and has no further comments.
i	<b>Changes to prey resource</b>
	The Applicant agrees with the notes provided and has no further comments.
j	<b>Changes to water quality</b>
	The Applicant agrees with the notes provided and has no further comments.
k	<b>Impacts from the project alone</b>
	The Applicant agrees with the notes provided and has no further comments.
l (?)	<b>In-combination effects (construction)</b>
	The Applicant agrees with the summary provided and notes that the wording of Condition 14(1)(m) and 9(1)(l) of the Generation and Transmission DMLs, respectively, allows a conclusion of no AEoI to be reached at the pre-consent stage on the basis that construction cannot commence until the MMO is satisfied that there would be no AEoI.
m	<b>In-combination effects (operation)</b>
	The Applicant agrees with the notes provided and has no further comments.

## 8.7 Paston Great Barn SAC

**Table 16 Applicant's Response on Integrity Matrix 7 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a (?)	<b>Direct effects on ex-situ habitats functionally connected to the SAC</b>
	The updated Outline Landscape and Ecological Management Strategy (OLEMS) (document reference 8.7) provided at Deadline 7 includes details of hedgerow improvement (including the provision of a Hedgerow Mitigation Plan to be agreed post-consent) as requested by Natural England. As noted, NE [REP6-032] confirmed that it had withdrawn its concerns in relation to the Paston Barn SAC and the Applicant is therefore confident that following a review of the OLEMS, Natural England will maintain their conclusion provided in Discretionary Advice Service (DAS) response <i>Planning consultation: Norfolk Vanguard Offshore Windfarm Appendix 3 Clarification Note – Bat Impact Assessment – Paston Great Barn SAC</i> (submitted to the Examination in Appendix 2 of the Onshore Ecology Clarification Notes - Position Statement (document reference ExA; ISH4; 10.D6.9), submitted at Deadline 6) that there is no potential for AEoI on Paston Great Barn SAC.
b	<b>Disturbance due to groundwater / hydrology changes</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>Impacts from noise disturbance</b>
	The Applicant considers working hours to be a component of the project design, however the Applicant notes the ExA's position that if the Project's working hours are considered to be mitigation, then potential effects from noise disturbance needs to be screened in and potential AEoI considered. The Applicant considers the project's working hours are sufficient to ensure that there is no potential AEoI arising from construction noise upon qualifying features of the Paston Great Barn SAC.
d	<b>Impacts from light disturbance</b>

Note Ref.	Applicant's Response
	The Applicant agrees with the notes provided and has no further comments.
e (?)	<b>In-combination effects</b>
	The Applicant maintains the position that if potential for AEOI was not determined with respect to a site due to Norfolk Vanguard alone, there is no prospect of an in-combination effect occurring with another plan or project for Paston Great Barn SAC. In light of the final position on impacts alone ((a), (b), (c), (d), above), there is therefore no potential for in-combination AEOI occurring.

## 8.8 River Wensum SAC

**Table 17 Applicant's Response on Integrity Matrix 8 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Direct effects on land within the SAC boundary</b>
	The Applicant considers trenchless crossing techniques to be a component of the project design, however the Applicant notes the ExA's position that if the use of trenchless crossing techniques to cross the River Wensum are considered to be mitigation, then potential direct effects on land within the SAC boundary therefore need to be screened in and potential AEOI considered. The Applicant agrees with the notes provided and has no further comments.
b	<b>Direct effects on ex-situ habitats</b>
	The Applicant agrees with the notes provided and has no further comments.
c (?)	<b>Indirect effects</b>
	The updated Outline Code of Construction Practice (OCoCP) (document reference 8.1) provided at Deadline 7 includes details of sediment management and restoration/reinstatement as requested by Natural England. As noted, NE [REP7-75] confirmed that it had withdrawn its concerns in relation to the River Wensum SAC and the Applicant is therefore confident that following a review of the OCoCP Natural England will maintain their conclusion provided in DAS response <i>Planning consultation: Norfolk Vanguard Offshore Windfarm Clarification Note - Sediment Management at the River Wensum crossing</i> (submitted to the Examination in Appendix 2 of the Onshore Ecology Clarification Notes - Position Statement (document reference ExA; ISH4; 10.D6.9), submitted at Deadline 6) that there is no potential for AEOI on the River Wensum SAC.
d	<b>Pollution control</b>
	The Applicant agrees with the notes provided and has no further comments.
e (?)	<b>In-combination effects</b>
	The Applicant's position is that if potential for AEOI was not determined with respect to a site due to Norfolk Vanguard alone, there is no prospect of an in-combination effect occurring with another plan or project for the River Wensum SAC. In light of the final position on impacts alone ((a), (b), (c), (d), above), there is therefore no potential for in-combination AEOI occurring.

## 8.9 Norfolk Valley Fens SAC

**Table 18 Applicant's Response on Integrity Matrix 9 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>Groundwater/hydrology effects</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Sediment management and reinstatement/restoration</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>Pollution control</b>
	The Applicant agrees with the notes provided and has no further comments.
d	<b>Effects from changing air quality</b>
	The Applicant agrees with the notes provided and has no further comments.
e	<b>In-combination effects</b>
	The Applicant agrees with the notes provided and has no further comments.
f	<b>Semi-natural dry grasslands and scrubland facies on calcareous substrates, narrow mouthed whorl snail and Desmoulin's whorl snail</b>
	The Applicant agrees with the notes provided and has no further comments.

## 8.10 The Broads SAC

**Table 19 Applicant's Response on Integrity Matrix 10 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a (?)	<b>Indirect effects</b>
	The response <i>Planning consultation: Norfolk Vanguard Offshore Windfarm Appendix 2 Clarification Note - Water Dependant Designated Sites</i> (submitted to the Examination in Appendix 2 of the Onshore Ecology Clarification Notes - Position Statement (document reference ExA; ISH4; 10.D6.9), submitted at Deadline 6) provided by Natural England on 18 March 2019 applies to all concerns regarding water dependant sites raised in Natural England's relevant representation. This includes The Broads SAC. The Applicant is therefore of the understanding that Natural England has withdrawn their concerns regarding indirect effects on The Broads SAC.
b (?)	<b>Sediment management and reinstatement/restoration</b>
	Requirement 25 of the draft DCO (Watercourse Crossings), sets out the requirement for a scheme and programme for each watercourse crossing, diversion and reinstatement, including site specific details regarding sediment management and pollution prevention measures, to be developed in advance of construction, and for the scheme to be submitted to and approved by the relevant planning authority in consultation with Natural England, Norfolk County Council, the Environment Agency and relevant drainage authorities. This Requirement covers North Walsham and Dilham Canal and Hundred Stream, the two watercourses which the project crosses upstream of The Broads SAC. It is the Applicant's understanding that Natural England have withdrawn their concerns regarding potential effects on The Broads SAC arising from sediment release based on this Requirement.
c	<b>Pollution control</b>



Note Ref.	Applicant's Response
	The Applicant agrees with the notes provided and has no further comments.
d (?)	<b>In-combination effects</b>
	The Applicant's position is that if potential for AEOI was not determined with respect to a site due to Norfolk Vanguard alone, there is no prospect of an in-combination effect occurring with another plan or project for the Broads SAC. In light of the final position on impacts alone ((a), (b), (c), above), there is therefore no potential for in-combination AEOI occurring.
e	<b>Otter - Direct and indirect effects</b>
	The Applicant agrees with the notes provided and has no further comments.

## 8.11 Broadland SPA and Ramsar

**Table 20 Applicant's Response on Integrity Matrix 11 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>All SPA features collision mortality (alone and in-combination)</b>
	The Applicant agrees with the notes provided and has no further comments.
b (?)	<b>Direct and indirect impacts to ex-situ habitats</b>
	<p>Since the publication of the RIES, the Applicant and Natural England have continued discussion on this issue. Following a meeting held on 21 May 2019, the Applicant and Natural England agreed that the original 5km buffer agreed through the evidence plan process would be suitable for the additional post-consent wintering surveys and for any subsequent mitigation measures required following completion of these surveys, and also that all appropriate SPA and Ramsar species will be surveyed. In addition, following discussions with Natural England the Applicant has agreed to manage land in such a way that should qualifying features of the Broadland SPA and Ramsar site be displaced during the works there will be suitable alternative habitat available. The Applicant and Natural England are still in discussion on the exact form of this mitigation however this will be captured in an update to Outline Landscape and Ecological Management Strategy (document reference 8.7) to be submitted at Deadline 9, and secured in the draft DCO through the Requirement for an Ecological Management Plan (Requirement 24), to be agreed with Natural England post-consent. A summary of ongoing discussion with Natural England is provided in the Natural England Position Statement submitted by the Applicant at Deadline 8 (document reference ExA; AS; 10.D8.17).</p> <p>Following final agreement on these measures from Natural England, the Applicant's position is that with the implementation of these measures there is no potential for AEOI on the ex-situ habitats of the Broadland SPA / Ramsar site.</p>
c (?)	<b>In-combination effects to ex-situ habitats</b>
	The Applicant's position is that if potential for AEOI was not determined with respect to ex-situ habitats due to Norfolk Vanguard, there is no prospect of an in-combination effect occurring with another plan or project for the Broadland SPA and Ramsar. In light of the final position on impacts alone ((b), above), there is no potential for in-combination AEOI occurring.
d	<b>Ramsar criterion 6 collision mortality, displacement / disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.

## 8.12 Breydon Water SPA and Ramsar

**Table 21 Applicant's Response on Integrity Matrix 12 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>All SPA features collision mortality (alone and in-combination)</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Ramsar criterion 6 collision mortality, displacement / disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.

## 8.13 North Norfolk Coast SPA and Ramsar

**Table 22 Applicant's Response on Integrity Matrix 13 (? = Areas identified in the RIES regarding disagreement between Interested Parties and the Applicant that a LSE can be excluded, or no information provided for the feature/impact)**

Note Ref.	Applicant's Response
a	<b>All SPA features collision mortality (alone and in-combination)</b>
	The Applicant agrees with the notes provided and has no further comments.
b	<b>Montagu's Harrier</b>
	The Applicant agrees with the notes provided and has no further comments.
c	<b>Ramsar criterion 6 collision mortality, displacement / disturbance and barrier effects</b>
	The Applicant agrees with the notes provided and has no further comments.

## 9 CONCLUSION

---

15. Based on the Information to Support HRA report (document 5.3) and various additional submissions to the Examination, the Applicant maintains the position that Norfolk Vanguard will have no AEoI on any sites screened into the HRA, taking into account mitigation measures which are secured through the DCO and associated certified documents.

## 10 REFERENCES

---

Gibb, N., Tillin, H., Pearce, B. & Tyler-Walters, H. (2014). Assessing the sensitivity of *Sabellaria spinulosa* reef biotopes to pressures associated with marine activities. Available at: [http://jncc.defra.gov.uk/PDF/JNCC\\_Report\\_504\\_web.pdf](http://jncc.defra.gov.uk/PDF/JNCC_Report_504_web.pdf)

Ospar Commission (2010) Quality Status Report 2010: Case Reports for the OSPAR List of threatened and/or declining species and habitats – Update. *Sabellaria spinulosa* reefs.

Royal HaskoningDHV (2016a) Thanet Extension Offshore Wind Farm. Report to inform Scoping

van Duren, L. A., Gittenberger, A., Smaal, A. C., van Koningsveld, M., Osinga, R., van der Lelij, J.A.C. and de Vries, M.B. (2017). Rich Reefs in the North Sea Exploring the possibilities of promoting the establishment of natural reefs and colonisation of artificial hard substrate.