

Norfolk Boreas Offshore Wind Farm

Statement of Common Ground

Natural England (Offshore Ornithology)
(Version 4)

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Glossary of Acronyms

AEol	Adverse Effect on Integrity
BTO	British Trust for Ornithology
CI	Confidence Interval
CIA	Cumulative Impact Assessment
CRM	Collision Risk Model
DCO	Development Consent Order
DML	Deemed Marine Licence
EIA	Environmental Impact Assessment
ExA	Examining Authority
HRA	Habitats Regulations Assessment
IPMP	In Principle Monitoring Plan
LSE	Likely Significant Effect
PEIR	Preliminary Environmental Information Report
PVA	Population Viability Analysis
sCRM	Stochastic Collision Risk Model
SNCB	Statutory Nature Conservation Bodies
SPA	Special Protection Area
SoCG	Statement of Common Ground

Glossary of Terminology

Offshore export cables	The cables which transmit power from the offshore electrical platform to the landfall.
Development area	An area of 725km ² located approximately 73km from the Norfolk coastline within which Norfolk Boreas Offshore Wind Farm and associated infrastructure would be located
The Project	Norfolk Boreas Wind Farm including the onshore and offshore infrastructure.

1 INTRODUCTION

1. This Statement of Common Ground (SoCG) has been prepared by Norfolk Boreas Limited (hereafter the Applicant) with initial input on version 1 and agreement on this version (Version 4) from Natural England to set out the areas where the Applicant considers, following discussions with Natural England, that there are areas of agreement and those areas for which it has not been possible to reach agreement in relation to the Development Consent Order (DCO) application for the Norfolk Boreas Offshore Wind Farm (hereafter 'the project'). A full description of the project can be found in Chapter 5 project description of the ES (document reference 6.1.5 of the Application, APP-218).
2. This SoCG comprises an agreement log which has been structured to reflect offshore ornithology aspects under consideration by Natural England with regard to the Norfolk Boreas DCO application (hereafter 'the Application'). The agreement log (Table 2) outlines all offshore ornithology specific matters which are agreed and those areas for which it has not been possible, during the Norfolk Boreas examination, to reach agreement between Natural England and the Applicant. A separate SoCG has been prepared which collates additional agreement logs on other topics of interest to Natural England (ExA.SoCG-17.D2.V4).
3. The Applicant has had regard to the Guidance for the examination of applications for development consent (Department for Communities and Local Government, 2015) when compiling this SoCG.
4. Natural England wishes it to be noted that the SoCG is a developer led process, with the Applicant providing the drafting and Natural England agreeing the wording. The document does not provide full detail on any issues; however, Natural England has provided an issues log with its outstanding issues outlined in full in their Relevant Representations. This issues log is owned by Natural England and reflects their position; it should not be taken as a representation of the Applicant's position.
5. Natural England has been updating the issues log as issues have been discussed and resolved and submitted this at appropriate deadlines throughout the Examination. The most recent update was submitted by Natural England at Deadline 7 (REP7-053). The previous versions of the SoCG were updated by the Applicant using the issues log as a record of its understanding on how issues have been progressed. The previous versions of the SoCG are now replaced by this final version, produced with Natural England.

1.1 Consultation with Natural England

6. This section briefly summarises the consultation that the Applicant has had with Natural England. For further information on the consultation process please see the Consultation Report (document reference 5.1 of the Application).
7. The Applicant had regular engagement with Natural England during the pre-Application process, both in terms of informal non-statutory engagement and formal consultation carried out pursuant to Section 42 of the Planning Act 2008. Due to similarities between the Norfolk Boreas project and its 'sister' project Norfolk Vanguard, which is being developed one year ahead of Norfolk Boreas, early consultation with stakeholders was conducted for both projects concurrently. Although latterly, consultation has been undertaken separately for the two projects Norfolk Boreas has had regard to the Norfolk Vanguard consultation and many of the issues on which agreement has been achieved for the Norfolk Vanguard project also apply to the Norfolk Boreas project.
8. During formal (Section 42) consultation, Natural England provided comments on the Preliminary Environmental Information Report (PEIR) by way of a letter dated 27th November 2018.
9. Further to the statutory Section 42 consultation, meetings were held with Natural England through the Evidence Plan Process.
10. As part of the pre-examination process, Natural England submitted a Relevant Representation to the Planning Inspectorate on the 31st August 2019. Natural England has also been engaged throughout the Examination deadlines. One offshore ornithology focussed meeting was held between the Applicant and Natural England following submission of the Application and several calls have been held during the Examination (Table 1).
11. Table 1 provides an overview of meetings and correspondence undertaken with Natural England for the Norfolk Boreas project. Minutes of the pre- application meetings, are provided in the Consultation Report Appendix 28.1 (APP-192).

Table 1 Summary of Consultation with Natural England in relation to Offshore Ornithology

Date	Contact Type	Topic
Pre-Application		
27 th February 2018	Discretionary Advice	Natural England feedback on Method Statement.
10 th January 2019	S42 consultation	Natural England's feedback on the PEIR.
27 th February 2019	Expert Topic Group meeting	Discussion of PEIR responses.

Date	Contact Type	Topic
Post-Application		
3 rd September 2019	Relevant Representation	Natural England's feedback on DCO Application.
10 th September 2019	Call to discuss outstanding issues with Natural England's ornithologists	Discussion of Natural England's Relevant. Representation responses and next steps.
25 th September 2019	1 st draft of the offshore ornithology SoCG	Clarifying areas of agreement and those in need of further discussion.
18 th October 2019	NE comments on 1 st draft of SoCG	Natural England's feedback on 1 st draft of SoCG.
31 st October 2019	Call with Natural England	Discussion of key aspects in order to agree progress on outstanding issues.
29 th November 2019	Call with Natural England	Discussion of Natural England's comments on the draft ornithology assessment update and other outstanding issues.
13 th January 2010	Call with Natural England	Discussion of ornithology topics in advance of Issue Specific Hearing.
5 th February 2020	Natural England Issues log and review of Applicant's Deadline 2 submission	Natural England's updated comments on the ornithology assessment.
13 th February 2020	Call with Natural England	Discussion with Natural England on the updated ornithology assessment and other outstanding issues.
20 th February 2020	Email from Natural England	Agreement on wording for monitoring condition and discussion of mitigation through revised project design.
24 th March 2020	Call with Natural England	Discussion of in-principle derogation case for Norfolk Boreas.
8 th April 2020	Updated SoCG	Submitted to Natural England for Review.

2 STATEMENT OF COMMON GROUND

12. The project has the potential to impact upon Offshore Ornithology. Chapter 13 of the Norfolk Boreas ES (document reference 6.1 of the Application) provides an assessment of the significance of these impacts.
13. Norfolk Boreas Limited notes that in Natural England's Relevant Representation (RR-099) it is stated that:

“Natural England feels that issues given Red status are so complex, or require the provision of so much outstanding information, that they are unlikely to be resolved during examination, and respectfully suggests that they be addressed beforehand.”
14. The Applicant has endeavoured to resolve as many of the issues raised prior to and during the examination through continued engagement with Natural England as evidenced by the progression of the SoCG submitted prior to examination on 4 November 2019, the versions submitted by the Applicant during the Examination and this, the current and final version. However, it is noted that there are a few 'red status' issues on which it has not been possible to resolve all disagreement between Natural England and the Applicant. Table 2 provides areas of agreement (common ground) and those areas for which it has not been possible to reach agreement, during the Norfolk Boreas examination, regarding the nature, magnitude and significance of potential impacts on offshore ornithological interests between Natural England and the Applicant.
15. Within the sections and tables below, under the different topics, areas of agreement are marked as green and areas where despite discussions between the parties and efforts to resolve Natural England's concerns, agreement has not been reached, are marked as red.

Table 2 Agreement Log - Offshore Ornithology

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
Environmental Impact Assessment (EIA)			
Existing Environment	Survey data collected for Norfolk Boreas for the characterisation of offshore ornithology are suitable for the assessment.	Agreed.	Agreed.
	The methods and techniques used to analyse offshore ornithological data are appropriate for characterising bird distributions and estimating populations.	Agreed.	Agreed.
	The use of generic seabird flight height estimates in Collision Risk Modelling (CRM) is appropriate given the survey contractors statement that heights estimated from digital aerial surveys are inaccurate.	Agreed.	Agreed.
	The method used to assign unidentified birds to species is appropriate.	Agreed.	Agreed.
	The methods used to define the relevant months for seabird breeding seasons in the assessment, presenting both the full breeding seasons as advised by Natural England, and the Applicant's preferred migration-free breeding months, are appropriate.	Agreed.	Agreed.
Assessment methodology			
General	Appropriate legislation, planning policy and guidance relevant to offshore ornithology has been used.	Agreed.	Agreed.
	The list of potential impacts on offshore ornithology assessed is appropriate.	Agreed.	Agreed.
	The methods for determining impact significance on offshore ornithological receptors is appropriate.	Agreed.	Agreed.
	The worst case scenario used in the assessment for offshore ornithology is appropriate.	Agreed.	Agreed.
	The characterisation of receptor sensitivity is appropriate.	Agreed.	Agreed.
Construction impact methods	The list of potential construction impacts and ornithology receptors assessed are appropriate.	Agreed.	Agreed.
	The methods used to estimate impacts during construction, including cable laying operations, based on mean density estimates and presenting both Natural England's preferred rates and the Applicant's evidence based rates (for displacement and mortality) are appropriate.	Agreed.	Agreed.

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
Operation impact methods	The sources of operational impact assessed are appropriate.	Agreed.	Agreed.
	The lists of ornithology receptors assessed for each impact are appropriate.	Agreed.	Agreed.
	Methods used to assess operational displacement presented in the ES are appropriate, using both the Applicant's preferred mortality and displacement rates and Natural England's preferred rates.	Agreed.	Agreed.
	<p>The method for assessing seabird collision risk is appropriate: using Band option 2, presenting results for mean seabird density (and 95% c.i.), Natural England advised species specific avoidance rates (+/- 2 SD), British Trust for Ornithology (BTO) flight height estimates (and 95% c.i.) and Natural England advised nocturnal activity rates. The Applicant additionally presented evidence based nocturnal factors for gannet.</p> <p>The Applicant notes Natural England's request to include stochastic collision mortality outputs using the Marine Scotland sCRM implementation of the Band (2012) model and that this version is still undergoing testing and validation due to output discrepancies (currently the errors identified in the sCRM have not been resolved so it is not possible to use this model at this stage). However, it is important to stress that the current assessment remains robust and the mean collision estimates are the same irrespective of whether model is run deterministically (as presented) or stochastically (as requested). Furthermore, the upper and lower estimates obtained using the upper and lower confidence estimates of seabird density (as requested by Natural England and included in the assessment) provide a reliable guide to the range expected to be obtained using the sCRM version of the model.</p>	Agreed. However, Natural England notes that the approach does not allow the uncertainty/variability in the various input parameters to be fully integrated. Therefore, Natural England recommended in its Relevant Representations that if the Applicant undertakes any further collision risk modelling that this is undertaken using the Marine Scotland Science (MSS) stochastic collision risk model (sCRM) and that the log file produced by the sCRM is also included, though we acknowledge that the Applicant's consultant has identified some technical issues with the MSS sCRM. If these issues do get resolved and updated collision risk modelling is undertaken due to modification to design parameters, then we would advise this is undertaken using the stochastic model. If the issue with the sCRM cannot be resolved in the timescale of the examination, we will base our advice on the ranges of predictions for the parameter that predicts the greatest uncertainty in the predictions from the variations of Band model outputs, which is the variation of bird density.	Agreed.
Non-seabird migrant collision assessment presented in the ornithology technical appendix is appropriate.	Agreed.	Agreed.	

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	Methods for assessing barrier effects are appropriate.	Agreed.	Agreed.
	Methods for assessing indirect effects are appropriate.	Agreed.	Agreed.
Impact assessment findings – project alone (EIA)			
Construction impacts	The magnitude of effects and conclusions on significance resulting from impacts during construction are correctly identified and predicted. No impacts of greater than minor adverse significance are predicted.	In Natural England's RR the inclusion of displacement assessments for the site alone based on upper and lower confidence intervals for bird density in addition to the mean densities in the ES were requested, although Natural England agreed that this would not alter the conclusion of the assessments.	Agreed.
Operation impacts	The magnitude of effects and conclusions on significance resulting from displacement impacts during operation are correctly identified and predicted. No impacts of greater than minor adverse significance are predicted.	Agreed for all species.	Agreed.
	Using option 2 of the Band collision model, with Natural England's preferred input parameters and model methods, the magnitude of effects and conclusions on significance resulting from collision impacts for seabirds and non-seabird migrants during operation are correctly identified and predicted. No impacts of greater than minor adverse significance are predicted for all species. Furthermore the Applicant has committed to additional mitigation to reduce collision impacts through a reduction in turbine numbers (maximum of 158) and an increase in minimum draught height from 22m to 35m above mean high water springs (MHWS) for turbines with a capacity up to and including 14.6MW and an increase in minimum draught height from 22 to 30m above MHWS for turbines with a capacity of 14.7MW and above. Updated project alone collisions are presented in REP7-029. These have reduced collisions by 62% to 74% compared with those in the original application (APP-201 and APP-226).	Agreed following Applicant's commitment to reduction in turbine numbers and increases to draught height.	Agreed.

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>No impacts of greater than minor adverse significance are predicted for gannet resulting from the combined effects of collisions and displacement for the project alone. As requested by Natural England an assessment covering this specific combined impact was undertaken, and submitted at Deadline 2 (REP2-035).</p> <p>Natural England has reviewed this assessment and agreed with the Applicant's conclusion that this combined impact from the project alone will not have a significant adverse effect (REP4-040 and REP7-048).</p>	Agreed.	Agreed.
	The magnitude of effects and conclusions on significance resulting from barrier effects during operation are correctly identified and predicted. No impacts of greater than minor adverse significance are predicted.	Agreed.	Agreed.
	The magnitude of effects and conclusions on significance resulting from indirect effects during operation are correctly identified and predicted. No impacts of greater than minor adverse significance are predicted.	Agreed.	Agreed.
Decommissioning impacts	The magnitude of effects and conclusions on significance resulting from impacts during decommissioning are correctly identified and predicted. No impacts of greater than minor significance are predicted.	Agreed that decommissioning impacts are likely to be no worse than those during construction. However, Natural England notes that further consultation will be required (at the time decommissioning is being planned) to ensure potential impacts are minimised.	Agreed.
Cumulative impact assessment (EIA)			
Cumulative construction assessment	The plans and projects considered within the Cumulative Impact Assessment (CIA) for construction are appropriate.	Agreed.	Agreed.
	The magnitude of effects and conclusions on significance resulting from cumulative impacts during construction are correctly identified and predicted. No impacts of greater than minor adverse significance are predicted.	Agreed.	Agreed.
Cumulative operation assessment	The plans and projects considered within the CIA are appropriate with the inclusion of the additional wind farms identified by Natural England in their Relevant Representation (REP-099). Natural England has confirmed that all the projects they requested are now included in the cumulative assessment (REP4-040). Natural England	Agreed	Agreed.

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>also notes that the figures used for projects that are still not determined (e.g. Hornsea Project Three and Norfolk Vanguard) have recently been updated. Revised figures for Norfolk Vanguard have been included in the updated cumulative and in-combination assessment (ExA;AS-1.D6.V1). The Applicant is aware that Hornsea Project Three has also submitted updated kittiwake collision estimates. However Natural England has advised the Applicant that the figures the Applicant has used to date, rather than the revised Hornsea Project Three figures, should be retained (which the Applicant has done). In addition, the figures for Dogger Bank Creyke Beck (gannet and kittiwake), East Anglia ONE North and East Anglia TWO (little gull) have also been updated at Deadline 6 (ExA;AS-1.D6.V1), as requested by Natural England.</p> <p>The magnitude of effects and conclusions on significance resulting from cumulative displacement impacts during operation are correctly identified and predicted and no impacts of greater than minor adverse significance are predicted.</p> <p>With respect to the additional wind farms and potentially incorrect figures referred to by Natural England in their Relevant Representation (REP-099), the Applicant reviewed the figures for all the wind farms and included the additional ones identified in the updated assessment provided to Natural England for comment. The final version was submitted at Deadline 2 (REP2-035) and Natural England has agreed this list is complete (REP4-040).</p> <p>Updated assessment for these impacts was provided at Deadline 2 (REP2-035) in accordance with Natural England's advice and Natural England agreed this provided the aspects they requested (REP4-040).</p> <p>Natural England has also agreed that there will not be a significant cumulative displacement effect for gannet (REP4-040).</p>	<p></p> <p>Agreed for gannet.</p> <p>Not agreed. Natural England considers that significant cumulative displacement impacts cannot be ruled out for red-throated diver, razorbill and guillemot.</p>	<p></p> <p>Agreed.</p> <p>Not agreed for red-throated diver, guillemot and razorbill.</p>

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>Using the Band collision model option 2, with Natural England's preferred input parameters (see above) and methods, combined with like for like figures for other projects (as far as possible given the information available), the magnitude of effects and conclusions on significance resulting from cumulative collision impacts for seabirds during operation are correctly identified and predicted.</p> <p>The updated assessment submitted at Deadline 2 (REP2-035) reviewed and updated the figures for all wind farms and included the additional wind farms requested by Natural England in their Relevant Representation (REP-099). Following this update the conclusions of the original assessment remained unchanged: there will not be any significant cumulative impacts for any species due to collision risk.</p> <p>Natural England has agreed the methods used in this assessment (REP4-040). Furthermore, Natural England has agreed that there will not be a risk of significant cumulative collision impacts on lesser black-backed gull, herring gull or little gull (REP4-040).</p> <p>The Applicant has submitted an updated cumulative assessment at Deadline 6 (REP8-025) which includes revised figures for Norfolk Boreas, Norfolk Vanguard, Dogger Bank Creyke Beck (gannet and kittiwake), East</p>	<p>Agreed for herring gull and lesser black-backed gull when Hornsea Project Three and Hornsea Project Four are excluded but not agreed when these projects are included (due to Natural England's uncertainty regarding the appropriate estimates to use for the Hornsea wind farms).</p> <p>Agreed for little gull irrespective of whether Hornsea Project Three and Hornsea Project Four are included or excluded (as Hornsea Project Three did not utilise their baseline survey data for little gull and so the associated levels of uncertainty with those figures does not apply and there are no figures available for little gull for Hornsea Project Four).</p>	<p>Agreed for herring gull and lesser black-backed gull when Hornsea Project Three and Hornsea Project Four are excluded.</p> <p>Agreed for little gull irrespective of whether Hornsea Project Three and Hornsea Project Four are included or excluded.</p> <p>Not agreed for herring gull and lesser black-backed gull when Hornsea Project Three and Hornsea Project Four are included.</p>

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	Anglia ONE North and East Anglia TWO (little gull) as advised by Natural England (REP4-040).	Not agreed for gannet, kittiwake and great black-backed gull with and without the inclusion of Hornsea Project Three and Hornsea Project Four due to the predicted magnitude of cumulative effect (and also due to Natural England's uncertainty regarding the appropriate estimates to use for the Hornsea wind farms).	Not agreed for gannet, kittiwake and great black-backed gull with and without the inclusion of Hornsea Project Three and Hornsea Project Four.
	No impacts of greater than minor adverse significance are predicted for gannet resulting from the combined effects of collisions and displacement for the project cumulatively with other projects. As requested by Natural England an assessment covering this specific combined impact was submitted at Deadline 2 (REP2-035).	Not agreed due to the predicted magnitude of cumulative effect (and also due to Natural England's uncertainty regarding the appropriate estimates to use for Hornsea Project Three and Hornsea Project Four).	Not agreed.
Habitats Regulations Assessment (HRA)			
Screening of LSE	The Approach to HRA Screening is appropriate.	Agreed.	Agreed.
	The following sites and species should be screened in for further assessment: <ul style="list-style-type: none"> Alde-Ore Estuary Special Protection Area (SPA) (lesser black-backed gull); Flamborough and Filey Coast SPA (gannet, kittiwake, guillemot, razorbill and the seabird assemblage); 	Agreed.	Agreed.

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<ul style="list-style-type: none"> Greater Wash SPA (red-throated diver, common scoter and little gull); and Outer Thames Estuary SPA (red-throated diver). 		
Assessment of AEol	<p>Conclusion of no AEol alone for lesser black-backed gull population at Alde-Ore Estuary SPA on the basis of collisions at Norfolk Boreas alone is appropriate. The updated assessment submitted at Deadline 2 (ExA;AS-1.D2.V1) provided consideration of the 95% confidence intervals as requested by Natural England in their relevant representation (REP-099). The conclusion of the original assessment (that there will be no AEol) was unchanged following this update.</p> <p>Natural England has confirmed that the approach taken includes assessment following their advice (REP4-040) and agrees that the risk of AEol can be ruled out for the project alone (REP4-040).</p> <p>Furthermore the Applicant has committed to additional mitigation to reduce collision impacts through a reduction in turbine numbers (maximum of 158) and an increase in minimum draught height to 35m above MHWS for turbines up to 14.6MW and an increase in minimum draught height to 30m above MHWS for turbines above 14.7MW. Updated project alone collisions are presented in REP7-031. These have reduced lesser black-backed gull collisions by 64% compared with those in the original application (APP-201 and APP-226).</p>	Agreed	Agreed.
	<p>Conclusion of no AEol for lesser black-backed gull population at Alde-Ore Estuary SPA is appropriate, on the basis of collisions for the project in-combination with other plans and projects.</p> <p>The Applicant reviewed and updated figures for all wind farms used in the assessment where necessary (REP2-035). However, the Applicant does not agree with Natural England's overly precautionary assumptions about the degree of connectivity for wind farms included in this assessment and the apportioning rates and conclusions of no AEol in the updated assessment remain the same as those presented in the original assessment.</p>	Not agreed due to magnitude of predicted in-combination effect Natural England cannot rule out AEol.	Not agreed.

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>Natural England has agreed that the methods provided include their preferred approach (REP4-040). The Applicant has submitted an updated in-combination assessment at Deadline 6 (REP8-025) which includes revised figures for Norfolk Boreas, Norfolk Vanguard and Dogger Bank Creyke Beck.</p> <p>Furthermore, the Applicant also notes that the final assessed in-combination collision impact for lesser black-backed gull from the Alde-Ore Estuary SPA for the consented East Anglia THREE wind farm (East Anglia THREE revised collision risk modelling, Table A2.3, page 35; ExA.ASR-NE.D8.V1, Appendix 3) was 58.8, of which East Anglia THREE contributed 1.8, and for which Natural England agreed there was no risk of an AEoI (East Anglia THREE Statement of common ground, Table 5 – Offshore Ornithology, page 29, ID 6b; ExA.ASR-NE.D8.V1 , Appendix 1).</p>		
	<p>Conclusion of no AEoI for gannet population at Flamborough and Filey Coast SPA is appropriate on the basis of the predicted collisions, displacement and these impacts combined for the project alone. The updated assessment submitted at Deadline 2 (REP2-035) provided assessment of the combined impact of collisions and displacement for Norfolk Boreas alone as requested. The Applicant has concluded there will be no AEoI for this impact.</p> <p>Natural England has agreed that an AEoI can be ruled out for this impact from the project alone (REP4-040, REP7-048).</p> <p>Furthermore the Applicant has committed to additional mitigation to reduce collision impacts through a reduction in turbine numbers (maximum of 158) and an increase in minimum draught height from 22m to 35m above MHWS for turbines with a capacity up to and including 14.6MW and an increase in minimum draught height from 22 to 30m above MHWS for turbines with a capacity of 14.7MW and above. Updated project alone collisions are presented in REP7-031. These have reduced gannet collisions by 74% compared with those in the original application (APP-201 and APP-226).</p>	<p>Agreed</p>	<p>Agreed.</p>

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>Conclusion of no AEoI for gannet population at Flamborough and Filey Coast SPA is appropriate on the basis of collisions, displacement and these impacts combined for the project in-combination with other plans and projects.</p> <p>The updated assessment submitted at Deadline 2 (REP2-035) provided assessment of the combined impact of collisions and displacement for Norfolk Boreas in-combination with other plans and projects as requested (including additional wind farms). The conclusion of this assessment remained unchanged: there will be no AEoI for this impact.</p> <p>Natural England has agreed that the methods provided include their preferred approach (REP4-040, REP7-048). Natural England has also agreed that an in-combination AEoI can be ruled out when Hornsea Project Three and Hornsea Project Four are excluded from the assessment.</p> <p>The Applicant has submitted an updated in-combination assessment at Deadline 6 (REP8-025) which includes revised figures for Norfolk Boreas, Norfolk Vanguard and Dogger Bank Creyke Beck.</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded. Not agreed when Hornsea Project Three and Hornsea Project Four are included due to Natural England's uncertainty regarding the appropriate estimates to use for these projects and hence Natural England cannot rule out AEoI.</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded.</p> <p>Not agreed when Hornsea Project Three and Hornsea Project Four are included.</p>
	<p>Conclusion of no AEoI alone for kittiwake population at Flamborough and Filey Coast SPA is appropriate on the basis of the predicted collisions for the project alone.</p> <p>The updated assessment (REP2-035) provided a summary of the kittiwake age class records as requested by Natural England in their Relevant Representation (RR-099) and a wide range of possible breeding season apportioning rates. The conclusion of the original assessment is</p>	<p>Agreed</p>	<p>Agreed.</p>

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>unaffected by these additions: there will be no AEoI for kittiwake due to Norfolk Boreas alone.</p> <p>Natural England has agreed the methods and that the risk of an AEoI can be ruled out for the project alone (REP4-040, REP7-048). Furthermore the Applicant has committed to additional mitigation to reduce collision impacts through a reduction in turbine numbers (maximum of 158) and an increase in minimum draught height from 22m to 35m above MHWS for turbines with a capacity up to and including 14.6MW and an increase in minimum draught height from 22 to 30m above MHWS for turbines with a capacity of 14.7MW and above. Updated project alone collisions are presented in REP7-031. These have reduced kittiwake collisions by 72% compared with those in the original application (APP-201 and APP-226).</p>		
	<p>Conclusion of no AEoI for kittiwake population at Flamborough and Filey Coast SPA is appropriate on the basis of predicted collisions for the project in-combination with other plans and projects.</p> <p>Natural England has agreed the methods used but does not agree that the risk of an AEoI can be ruled out (REP4-040, REP7-048).</p> <p>At Deadline 6 the Applicant submitted an updated in-combination assessment (REP8-025) which included revised figures for Norfolk Boreas, Norfolk Vanguard and Dogger Bank Creyke Beck.</p> <p>Furthermore, the Applicant noted that the final assessed in-combination collision impact for kittiwake from the Flamborough and Filey Coast SPA for the consented East Anglia THREE wind farm (East Anglia THREE revised collision risk modelling Table A2.2, page 33; ExA.ASR-NE.D8.V1, Appendix 3) was 319, of which East Anglia THREE contributed 7.8 individuals, and for which Natural England stated that although an AEoI could not be ruled out the contribution from East Anglia THREE, while not de minimis was so small as to not materially alter the significance or the likelihood of an adverse effect on the integrity of the SPA (East Anglia</p>	<p>Not agreed due to magnitude of predicted in-combination effect (and also due to Natural England's uncertainty regarding the appropriate estimates to use for Hornsea Project Three and Hornsea Project Four) and hence Natural England consider there to be an AEoI irrespective of whether Hornsea Project Three and Hornsea Project Four are included or excluded. Further to this, Natural England has highlighted that the in-combination total of collision mortality had already exceeded levels which were considered to be of an AEoI to kittiwake at FFC SPA, and that any additional mortality arising from these proposals would therefore be considered adverse.'</p> <p>In light of the SoS post examination letters for HP3 and NVG in relation to consideration of the Art. 6.4 derogations Natural England has reviewed all of its examination advice including the scale of any alone/in-combination impacts. In addition to aid the SoS in the decision making process we have</p>	<p>Not agreed</p>

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	<p>THREE statement of common ground, Table 5, page 29, ID 6f; ExA.ASR-NE.D8.V1, Appendix 1).</p> <p>Natural England has introduced a revised position on this potential effect at a very late stage in the Norfolk Boreas examination (since Deadline 7) which the Applicant disagrees with. It is also contrary to their previously consistent advice that "it is not possible to rule out" an AEol, which has been Natural England's position since 2016 and was stated 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).</p> <p>The Applicant is not aware of any new evidence which would form the basis for revising this position. It has also been made despite the fact 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). Consequently the Applicant is unclear why Natural England's position has changed at this stage.</p>	<p>been tasked with making a clear distinction between where we believe there is AEol and where due to uncertainties (i.e. reasonable scientific doubt) an adverse effect on integrity cannot be excluded. One such matter is adverse effect on kittiwake due to the consented in-combination impacts from proposals up to and including Hornsea Project 2 and East Anglia 3, to which the impacts of the projects currently in examination need to be added. Therefore, in Natural England's recent representations to the Secretary of State's consultations regarding the Hornsea 3 and Norfolk Vanguard wind farms, Natural England highlighted that the in-combination total collision mortality across consented plans/projects had already exceeded levels which were 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. This includes the additional mortality from Norfolk Boreas and therefore Natural England has updated its position in submissions at Norfolk Boreas Deadline 9 to reflect this requirement.</p>	
	<p>Conclusion of no AEol for razorbill population at Flamborough and Filey Coast SPA is appropriate on the basis of displacement impacts for the project alone.</p>	<p>Agreed for Norfolk Boreas alone using NE's preferred methods.</p>	

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	<p>Conclusion of no AEol for razorbill population at Flamborough and Filey Coast SPA is appropriate on the basis of displacement impacts for the project in-combination with other plans and projects. The updated assessment (REP2-035) included a review of the figures for all wind farms and included the additional wind farms identified by Natural England in their Relevant Representation (REP-099). The conclusion of the original assessment was unaffected by these additions: there will be no AEol for razorbill due to in-combination displacement.</p> <p>Natural England has agreed that the assessment follows their advice and that an AEol can be ruled out when Hornsea Project Three and Hornsea Project Four are excluded from the assessment (REP4-040).</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded. Not agreed when Hornsea Project Three and Hornsea Project Four are included due to Natural England's uncertainty regarding the appropriate estimates to use for these projects and hence Natural England cannot rule out risk of AEol.</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded from the assessment.</p> <p>Not agreed when Hornsea Project Three and Hornsea Project Four are included in the assessment.</p>
	<p>Conclusion of no AEol for guillemot population at Flamborough and Filey Coast SPA is appropriate on the basis of displacement impacts for the project alone.</p>	<p>Agreed for Norfolk Boreas alone using NE's preferred methods.</p>	<p>Agreed.</p>
	<p>Conclusion of no AEol for guillemot population at Flamborough and Filey Coast SPA is appropriate on the basis of displacement impacts for the project in-combination with other plans and projects. The updated assessment (REP2-035) included a review of the figures for all wind farms and included the additional wind farms identified by Natural England in their Relevant Representation (REP-099). The conclusion of the original assessment was unaffected by these additions: there will be no AEol for guillemot due to in-combination displacement.</p> <p>Natural England has agreed that the assessment follows their advice and that an AEol can be ruled out when Hornsea Project Three and Hornsea Project Four are excluded from the assessment (REP4-040).</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded. Not agreed when Hornsea Project Three and Hornsea Project Four are included due to Natural England's uncertainty regarding the appropriate estimates to use for these projects and hence Natural England cannot rule out risk of AEol.</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded from the assessment.</p> <p>Not agreed when Hornsea Project Three and Hornsea Project Four are included in the assessment.</p>
	<p>Conclusion of no AEol for the assemblage at Flamborough and Filey Coast SPA is appropriate on the basis of displacement or collision impacts for the project alone. Following the completion of the updated assessment (REP2-035), which addressed the issues raised by Natural England in their Relevant</p>	<p>Agreed</p>	<p>Agreed.</p>

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>Representation (RR-099) on the individual named species (as summarised above) the Applicant concluded that there will be no AEol on the seabird assemblage feature of the SPA due to Norfolk Boreas alone.</p> <p>Natural England has agreed with this conclusion (REP4-040).</p>		
	<p>Conclusion of no AEol for the assemblage at Flamborough and Filey Coast SPA is appropriate on the basis of displacement or collision impacts for the project in-combination with other plans and projects.</p> <p>Following the completion of the updated assessment (REP2-035), which addressed the issues raised by Natural England in their Relevant Representation (RR-099) on the individual named species (as summarised above) the Applicant concluded that there will be no AEol on the seabird assemblage feature of the SPA due to collision and displacement impacts in-combination with other plans or projects.</p> <p>Natural England has agreed that AEol can be ruled out when Hornsea Project Three and Hornsea Project Four are excluded from the assessment (REP4-040).</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded.</p> <p>Not agreed when Hornsea Project Three and Hornsea Project Four are included due to Natural England's uncertainty regarding the appropriate estimates to use for these projects and hence Natural England cannot rule out risk of AEol.</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are excluded from the assessment.</p> <p>Not agreed when Hornsea Project Three and Hornsea Project Four are included in the assessment.</p>
	<p>Conclusion of no AEol for the red-throated diver population at the Greater Wash SPA is appropriate on the basis of displacement impacts for the project alone during construction. The Applicant has also included the following restriction on cable installation construction works at Condition 19 of the Transmission DMLs (Schedule 11-12):</p> <p><i>"During the months of January to March inclusive, construction activities consisting of cable installation for Work No. 4A and Work No. 4B must only take place with one main cable laying vessel."</i></p>	<p>Agreed on the basis that the Applicant has committed to mitigation options for offshore cable route laying, such as avoiding or reducing cable laying activities during the non-breeding season/period of peak numbers, and that these mitigation measures are agreed with Natural England and then secured appropriately in the DCO.</p>	<p>Agreed as appropriate mitigation is secured in the draft DCO at Condition 19 of the Transmission DMLs (Schedule 11-12).</p>
	<p>Conclusion of no AEol for the red-throated diver population at the Greater Wash SPA is appropriate on the basis of displacement impacts during the construction of the project in-combination with other plans and projects.</p>	<p>Agreed on the same basis as above.</p>	<p>Agreed as appropriate mitigation is secured in the draft DCO at Condition 19 of the Transmission DMLs (Schedule 11-12).</p>

Topic	Norfolk Boreas Limited's position	Natural England's position	Final position
	<p>Conclusion of no AEoI for the red-throated diver population at the Greater Wash SPA is appropriate on the basis of displacement impacts during the operational phase for the project alone.</p>	<p>Agreed. With regard to displacement from the Greater SPA due to operation and maintenance vessel movements, Natural England welcomes the Applicant's commitment in paragraphs 335 and 359 of the Report to Inform HRA to engage with Natural England to agree the terms of these vessel management measures, as reflected in the draft DCO (see Schedules 9 & 10, condition 14(1) (d) (vi)).</p>	<p>Agreed as appropriate mitigation is secured in the draft DCO at Condition 14(1) (d) (vi) of Schedules 9 and 10).</p>
	<p>Conclusion of no AEoI for the red-throated diver population at the Greater Wash SPA is appropriate on the basis of displacement impacts during the operational phase for the project in-combination with other plans and projects.</p> <p>The updated assessment (REP2-035) submitted at Deadline 2 provided the additional 'like for like' assessment requested by Natural England in their Relevant Representation (REP-099). Following this the Applicant has concluded there will be no AEoI due to Norfolk Boreas in-combination with other plans and projects due to displacement.</p> <p>Natural England has agreed that an AEoI can be ruled out on the basis of the Applicant's commitment to appropriate mitigation (REP4-040).</p>	<p>Agreed (on the same basis as the project alone, above).</p>	<p>Agreed as appropriate mitigation is secured in the draft DCO at Condition 14(1) (d) (vi) of Schedules 9 and 10).</p>
	<p>Conclusion of no AEoI for the red-throated diver population at the Outer Thames Estuary SPA is appropriate on the basis of displacement impacts during the operational phase for the project alone. Agreed management to minimise potential for disturbance has now been included in the draft DCO (Generation DMLs beneath the PEMP - Condition 14(1)(d)(vi) of Schedule 9 and 10).</p>	<p>Agreed. With regard to displacement from the Outer Thames Estuary SPA due to operation and maintenance vessel movements, Natural England welcomes the Applicant's commitment in paragraphs 335 and 359 of the Report to Inform HRA to engage with Natural England to agree the terms of these vessel management measures, as reflected in the draft DCO (see Schedules 9 & 10, condition 14(1) (d) (vi)).</p>	<p>Agreed as appropriate mitigation is secured in the draft DCO at Condition 14(1) (d) (vi) of Schedules 9 and 10).</p>

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	<p>Conclusion of no AEoI for the red-throated diver population at the Outer Thames Estuary SPA is appropriate on the basis of displacement impacts during the operational phase for the project in-combination with other plans and projects.</p>	<p>Agreed (on the same basis as project alone, above).</p>	<p>Agreed as appropriate mitigation is secured in the draft DCO at Condition 14(1) (d) (vi) of Schedules 9 and 10).</p>
	<p>Conclusion of no AEoI for the little gull population at the Greater Wash SPA is appropriate on the basis of collision impacts for the project alone. The updated assessment (REP2-035) provided the additional assessment using the 95% confidence intervals as requested by Natural England in their Relevant Representation (REP-099). This update did not change the conclusions of the original assessment: that there will be no AEoI for little gull due to collisions at Norfolk Boreas alone.</p> <p>Natural England has agreed that an AEoI can be ruled out due to the project alone (REP4-040).</p> <p>Furthermore the Applicant has committed to additional mitigation to reduce collision impacts through a reduction in turbine numbers (maximum of 158) and an increase in minimum draught height from 22m to 35m above MHWS for turbines with a capacity up to and including 14.6MW and an increase in minimum draught height from 22 to 30m above MHWS for turbines with a capacity of 14.7MW and above. Updated project alone collisions are presented in REP7-031. These have reduced little gull collisions by 72% compared with those in the original application (APP-201 and APP-226).</p>	<p>Agreed.</p>	<p>Agreed.</p>
	<p>Conclusion of no AEoI for the little gull population at the Greater Wash SPA is appropriate on the basis of collisions impacts for the project in-combination with other plans and projects, based on availability of estimates for other wind farms.</p> <p>The updated assessment (REP2-035) reviewed the figures for all wind farms as requested by Natural England in their Relevant Representation (REP-099). This update did not change the conclusions of the original assessment, that there will be no AEoI for little gull due to collisions at Norfolk Boreas in-combination with other plans and projects.</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are included or excluded.</p> <p>However this conclusion is made with reduced confidence due to the lack of information on public domain regarding certain offshore wind farms.</p>	<p>Agreed when Hornsea Project Three and Hornsea Project Four are included or excluded from the assessment.</p> <p>However this conclusion is made with reduced confidence due to the lack of information on public</p>

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	<p>The Applicant has submitted an updated in-combination assessment at Deadline 6 (REP8-025) which includes revised figures for Norfolk Boreas, Norfolk Vanguard, Dogger Bank Creyke Beck , East Anglia ONE North and East Anglia TWO.</p> <p>Natural England has agreed that AEoI can be ruled out when Hornsea Project Three and Hornsea Project Four are excluded and included in the assessment (REP7-047).</p>		<p>domain regarding certain offshore wind farms.</p>
Management Measures – Mitigation and Monitoring			
Monitoring	<p>The proposed monitoring, which will be developed through the Ornithological Monitoring Plan in accordance with the In-Principle Monitoring Plan (IPMP), (document 8.12), is adequate.</p> <p>For information the IPMP states:</p> <ul style="list-style-type: none"> • The aims of monitoring should be to reduce uncertainty for future impact assessment and address knowledge gaps. To this end, Norfolk Boreas Limited will engage with stakeholders and the methodology would be developed through the Ornithological Monitoring Plan (required under Condition 14(1)(l) of the Generation Deemed Marine Licences (DMLs) (Schedule 9 and 10 of the DCO)). As for marine mammals (section 4.5), there may be little purpose or advantage in any site-specific monitoring for offshore ornithology and therefore a strategic approach may be more appropriate in providing answers to specific questions where significant environmental impacts have been identified at a cumulative/in-combination level. • Aspects for consideration will include collision risks, displacement and improving reference population estimates and understanding of colony connectivity. 	<p>Natural England considers that validation of the assessment methods/models used in the impact assessment is another core aim of post-construction monitoring and suggests this is added to the aims description. We also note that a strategic approach to addressing specific questions around cumulative/in-combination issues would not necessarily preclude individual projects having specific licence conditions that they need to meet as part of a wider strategic approach.</p> <p>In addition, Natural England does not agree with the HRA conclusions (as detailed above) set out by the Applicant in the In-Principle Monitoring Plan for offshore ornithology. Natural England considers the aspects that are likely to be relevant for consideration for post-consent monitoring are: improving understanding of collision risk and displacement, collection of reliable data on seabird flight heights and colony-based studies. This is reflected in Natural England's previous advice at recent projects (e.g. Vanguard) regarding their concerns about predicted levels of cumulative and in-combination impacts on North Sea seabirds (see above), and Boreas' likely contribution to those impacts.</p>	<p>Agreed (updated wording has now been agreed by both parties and is included in the updated dDCO submitted at Deadline 5 (Condition 9(1)(l) of Schedule 9-10).</p>

The names inserted below are to confirm that this is the current positions of the Applicant regarding this SOCG (at Deadline 10).

Printed Name	Alan Gibson
Position	Senior Responsible Officer
On behalf of	Natural England
Date	06.05.2020

Printed Name	Jake Laws
Position	Norfolk Boreas Consent Manager
On behalf of	Norfolk Boreas Limited (the Applicant)
Date	06.05.2020