

# East Anglia ONE North and East Anglia TWO Offshore Windfarms

## **Applicants' Comments on Natural England's Deadline 7 Submissions**

Applicant: East Anglia TWO and East Anglia ONE North Limited Document Reference: ExA.AS-17.D8.V1 SPR Reference: EA1N\_EA2-DWF-ENV-REP-IBR-001012

Date: 25<sup>th</sup> March 2021 Revision: Version 1 Author: Royal HaskoningDHV

Applicable to East Anglia ONE North and East Anglia TWO



	Revision Summary					
Rev	Date	Prepared by	Checked by	Approved by		
001	25/03/2021	Paolo Pizzolla	Lesly Jamieson / Ian MacKay	Rich Morris		

	Description of Revisions			
Rev	Page	Section	Description	
001	n/a	n/a	Final for Submission	



### **Table of Contents**

1	Introduction	1
2	Applicants' Comments on NE Appendix A15b [REP7-071] – NE's Response to Offshore Ornithology Compensation and Derogation Documents [REP6-044, REP6-045 and REP6-046]	ו 2
3	Applicants' Comments on NE Appendix A14b [REP7-070] – NE's Response on Legal Submissions Concerning Displacement of RTD [REP6-020] 19	9
4	Applicants' Comments on NE Appendix C8 [REP7-073] – NE'sResponse to the Ecology Survey Results [REP6-035]24	4
5	Applicants' Comments on NE Appendix F9 [REP7-074] – NE's All Other Matters Update 20	6



#### Glossary of Acronyms

	Advaraa Effect on Intervity
AEol	Adverse Effect on Integrity
AONB	Area of Outstanding Natural Beauty
APP	Application Document
AS	Additional Submission
CoCP	Code of Construction Practice
CRM	Collision Risk Modelling
DCO	Development Consent Order
DML	Deemed Marine Licence
EIA	Environmental Impact Assessment
EMP	Ecological Management Plan
ES	Environmental Statement
ESC	East Suffolk Council
FFC	Flamborough & Filey Coast
HRA	Habitats Regulation Assessment
IPMP	In-Principle Monitoring Plan
IPSIP	In-Principle Site Integrity Plan
LVIA	Landscape and Visual Impact Assessment
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
NE	Natural England
NGET	National Grid Electricity Transmission
OLEMS	Outline Landscape and Ecological Management Strategy
OTE	Outer Thames Estuary
OWF	Offshore Windfarm
PEIR	Preliminary Environmental Information Report
PTS	Permanent Threshold Shift / Permanent Auditory Injury
PVA	Population Viability Analysis
RSPB	Royal Society for the Protection of Birds
RTD	Red-Throated Diver
SAC	Special Area of Conservation
SCC	Suffolk County Council
SCHAONB	Suffolk Coasts and Heaths Area of Outstanding Natural Beauty
SIP	Site Integrity Plan
SNS	Southern North Sea
SPA	Special Protected Area
UXO	Unexploded Ordnance



#### Glossary of Terminology

Applicant	East Anglia TWO Limited / East Anglia ONE North Limited
Construction operation and maintenance platform	A fixed offshore structure required for construction, operation, and maintenance personnel and activities.
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia ONE North windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive, as defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017 and regulation 18 of the Conservation of Offshore Marine Habitats and Species Regulations 2017. These include candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas.
Generation Deemed Marine Licence (DML)	The deemed marine licence in respect of the generation assets set out within Schedule 13 of the draft DCO.
Horizontal directional drilling (HDD)	A method of cable installation where the cable is drilled beneath a feature without the need for trenching.
Inter-array cables	Offshore cables which link the wind turbines to each other and the offshore electrical platforms, these cables will include fibre optic cables.
Jointing bay	Underground structures constructed at intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables.
Link boxes	Underground chambers within the onshore cable route housing electrical earthing links.
Meteorological mast	An offshore structure which contains metrological instruments used for wind data acquisition.
Mitigation areas	Areas captured within the onshore development area specifically for mitigating expected or anticipated impacts.
Marking buoys	Buoys to delineate spatial features / restrictions within the offshore development area.



Monitoring buoys	Buoys to monitor <i>in situ</i> condition within the windfarm, for example wave and metocean conditions.
Natura 2000 site	A site forming part of the network of sites made up of Special Areas of Conservation and Special Protection Areas designated respectively under the Habitats Directive and Birds Directive.
Offshore cable corridor	This is the area which will contain the offshore export cables between offshore electrical platforms and landfall.
Offshore development area	The East Anglia TWO / East Anglia ONE North windfarm site and offshore cable corridor (up to Mean High Water Springs).
Offshore electrical infrastructure	The transmission assets required to export generated electricity to shore. This includes inter-array cables from the wind turbines to the offshore electrical platforms, offshore electrical platforms, platform link cables and export cables from the offshore electrical platforms to the landfall.
Offshore electrical platform	A fixed structure located within the windfarm area, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore.
Offshore export cables	The cables which would bring electricity from the offshore electrical platforms to the landfall. These cables will include fibre optic cables.
Offshore infrastructure	All of the offshore infrastructure including wind turbines, platforms, and cables.
Offshore platform	A collective term for the construction, operation and maintenance platform and the offshore electrical platforms.
Platform link cable	Electrical cable which links one or more offshore platforms. These cables will include fibre optic cables.
Safety zones	A marine area declared for the purposes of safety around a renewable energy installation or works / construction area under the Energy Act 2004.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.
Transition bay	Underground structures at the landfall that house the joints between the offshore export cables and the onshore cables.
Transmission DML	The deemed marine licence in respect of the transmission assets set out within Schedule 14 of the draft DCO.



#### 1 Introduction

- 1. This document presents the Applicants' comments on Natural England's (NE) Deadline 7 submissions as follows.
  - Section 2 Appendix A15b [REP7-071]: NE's Response to Offshore Ornithology Compensation and Derogation Documents [REP6-044, REP6-045 and REP6-046]
  - **Section 3** Appendix A14b [REP7-070]: NE's Response on Legal Submissions Concerning Displacement of RTD [REP6-020]
  - Section 4 Appendix C8 [REP7-073]: NE's Response to the Ecology Survey Results [REP6-035]
  - Section 5 Appendix F9 [REP7-074] NE's All Other Matters Update
- 2. This document is applicable to both the East Anglia TWO and East Anglia ONE North DCO applications, and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's procedural decisions on document management of 23<sup>rd</sup> December 2019 (PD-004). Whilst this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it for the other project submission.

- SCOTTISHPOWER RENEWABLES
- 2 Applicants' Comments on NE Appendix A15b [REP7-071] NE's Response to Offshore Ornithology Compensation and Derogation Documents [REP6-044, REP6-045 and REP6-046]

ID	NE Comment	Applicants' Comments
Sur	mmary of NE's Position	
1	Natural England notes that the Applicant's position continues to be that there would be no Adverse Effect on Integrity (AEoI) of any site as a result of either project alone or in-combination effects. We also acknowledge that the Applicant has produced this document to respond to the ExA Rule 6 letter of 16th July 2020 to engage with the derogation tests.	notod
2	Natural England's view remains, as set out in our offshore ornithological update at Deadline 3 [REP3-117] that an AEoI cannot be ruled out beyond reasonable scientific doubt for the following sites and features:	Noted



HRA species and site	EA1N & EA2 alone	EA1N/EA2 in-combination* with other plans & projects	
Red-throated diver, Outer Thames Estuary SPA: displacement	AEol cannot be ruled out due to displacement from EA1N	AEol cannot be ruled out due to displacement from EA1N/EA2 and in-combination with existing plans and projects	
Gannet, Flamborough & Filey Coast (FFC) SPA: collision	No adverse effect on site integrity (AEoI)	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & H4**	
Gannet, Flamborough & Filey Coast SPA: displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & H4**	
Gannet, Flamborough & Filey Coast SPA: collision + displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**	
Kittiwake, Flamborough & Filey Coast SPA: collision	No AEol	Unable to rule out AEoI excl. and incl. H4**	
Guillemot, Flamborough & Filey Coast SPA: displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**	
Razorbill, Flamborough & Filey Coast SPA: displacement	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**	
Seabird assemblage, Flamborough & Filey Coast SPA	No AEol	No AEol excl. HP3 and HP4 Unable to rule out AEol incl. HP3* & HP4**	
Lesser black-backed gull, Alde-Ore Estuary SPA: collision	No AEol	Unable to rule out AEoI (NB: NE agrees with no collisions being apportioned from HP3 & HP4)	
nean/central prediction h compensation. We highlig	has been use ht that the pree	s subject to compensation t d to determine the requir dicted impacts are estimatic ions, several of which ha	Compensation Measures document at Deadline 8 (document references) ExA.AS-8.D8.V2) to consider compensation requirements based on



ID	NE Comment	Applicants' Comments
	England advises that a range-based approach is undertaken to consider impacts. Accordingly, we advise that the Applicant should estimate the degree of compensation potentially required using the upper 95% confidence estimate of mortality, not the mean figure. Otherwise, and if a 1:1 ratio is used for example, due to the level of uncertainty the compensation measures may not fully compensate for the actual impact.	The Applicants also note that the SoS decision in respect of the Hornsea Three project was on the basis of the mean values when considering the number of individuals to be compensated for.
4	Natural England notes that only a single project-specific compensatory option is proposed for each of the species. However, it is our view that the most ecologically effective compensatory measures should all be presented to ExA and SoS, setting out clearly what would be required in order to secure and deliver those options (however challenging). This will enable more informed decisions to be made and where appropriate reinforce the need for mechanisms to be developed to progress strategic options.	In the updated Offshore Ornithology Without Prejudice Compensation Measures document submitted at Deadline 8, the Applicants have presented an additional compensation measure for reducing bycatch of seabirds through the management of fishing gear. The Applicants considered reducing plastic pollution at gannet colonies however this measure has been discounted for the reasons described in Appendix 8 of the Offshore Ornithology Without Prejudice Compensation Measures document at Deadline 8 (document reference ExA.AS-8.D8.V2).
		The Applicants do not consider prey enhancement through fisheries management (including buying fishing vessel licences) to be a viable compensation measure for the reasons explained in REP6-046 and therefore this has not been included in the updated document.
5	The Applicant's assert that the details of the compensatory measures can be addressed once a decision on the need to compensate for the Project has been made by the SoS. Natural England's view is that this is not acceptable and advise that at the point of decision the SoS should be provided with sufficient confidence that appropriate compensation measures are available and have been or can be secured. In this context, our advice is to leave as little as is possible regarding the nature and implementation of the compensatory measures to the post-consent period, as the level of specific detail provided will be a key factor with respect to confidence in the success of the measures and securing them.	In drafting DCO schedule 18, the Applicants have ensured that the compensation measures proposed are appropriately secured at a level that provides adequate levels of compensation to offset the impacts of the Projects (noting that the extremely low numbers required to be offset for the Projects means that over-compensation is inevitable) whilst providing the necessary flexibility to allow for refinements in detail as the specifics of the measures are developed and agreed with stakeholders, Government, partners etc.



ID	NE Comment	Applicants' Comments
	Please be advised that the level of outstanding detail associated with the Hornsea Project 3 compensatory measures raises significant challenges to implementation and therefore we counsel against proceeding on the basis that an equivalent level of information to that provided by Hornsea Project 3 will necessarily be sufficient.	
6	Natural England has agreed with the Applicant to consider more detailed compensatory proposals to those provided at Deadline 6 which will be provided by the Applicant in support of a workshop on 10th March 2021. However, within this submission we have provided some high-level initial comments/advice on the Applicant's submissions in REP6-044 and REP6-045.	The Applicants have updated the Offshore Ornithology Without Prejudice Compensation Measures document at Deadline 8 (document reference ExA.AS-8.D8.V2).
Der	ogations	
7	The mitigation proposals which have been submitted to the examination [REP1- 047] and [REP3-073] do not fully mitigate the collision impacts on those SPA qualifying features at risk from in-combination levels of collision. Neither, by the Applicant's own admission does the 2km buffer between EA1N and the Outer Thames Estuary SPA mitigate the displacement of red throated diver to an acceptable level, as detailed in Natural England's advice on red throated divers in the Outer Thames	The Applicant considers that it has exhausted all avenues for mitigation. The Project Update Note [REP3-052] and Offshore Commitments [REP3-073] documents submitted at Deadline 3 clearly describe the constraints limiting the extent of OTE SPA buffer and draught height commitments which mitigate displacement impacts on red-throated divers and collision risk impacts respectively. The Applicants also draw attention to the very small numbers of collisions
	Estuary [REP4-087].	<ul> <li>apportioned to SPAs for the Projects:</li> <li>Gannet (FFC) 13.8/13</li> </ul>
		• Kittiwake (FFC) <mark>0.8/0.7</mark>
		<ul> <li>LBBG (Alde-Ore Estuary) 1.6/0.3</li> </ul>



ID	NE Comment	Applicants' Comments
		In addition, the Applicants note that evidence from the ORJIP collision avoidance study (Bowgen & Cook, 2018 <sup>1</sup> ) indicates that Avoidance Rates for gannet and kittiwake are higher than the Avoidance Rates currently recommended by the SNCBs and that using these evidence based rates would result in a reduction in overall collision mortality numbers by a greater magnitude than would be achieved by increasing draught height (approximately 50% for gannet and 10% for kittiwake, see AS-041). The Applicant notes that NE is reviewing the conclusions of Bowgen and Cook.
8	Natural England wishes to re-iterate the advice we provided in our written submissions [RR-059, REP1-172, REP4-088, REP5-082], namely that before progressing to the other derogations tests it should be demonstrated that every effort has been made to avoid, reduce and mitigate the impacts from East Anglia ONE North and East Anglia TWO.	See ID 7
9	Natural England's continued advice is that mitigation to remove an AEol on the Outer Thames Estuary SPA could be provided by increasing the buffer between the SPA boundary and EA1N i.e. in the form of a smaller array. This could be considered as a suitable project-level 'alternative solution', as set out in the EEC Article 6.4 Derogations guidance1. Whether the project has demonstrated that the alternative solutions test has been met, thereby allowing progression to further stages such as IROPI and compensation, is a matter for ExA and SoS consideration. However, we do wish to highlight that the proposed compensatory measures for red throated diver are not fit for purpose and that compensating for these impacts will be highly challenging, and therefore stress that it is imperative to exhaust the potential of mitigation measures to avoid AEoI first.	The Project Update Note [REP3-052] and Offshore Commitments (REP3- 073) documents submitted at Deadline 3 clearly describes the constraints limiting the extent of OTE SPA buffer. In the HRA Derogation Case document (document reference ExA.AS- 7.D8.V3) the Applicants have set out why they consider there to be no further feasible alternative regarding project design which would meet the project objectives (e.g. the requirement to increase renewable generation and meet the 2030 target for 40GW of offshore wind capacity).

<sup>&</sup>lt;sup>1</sup> Bowgen, K. and Cook, A. (2018). Bird Collision Avoidance: Empirical evidence and impact assessments. JNCC Report No. 614, JNCC, Peterborough.



ID	NE Comment	Applicants' Comments
Fis	heries management	
10	As noted by the Applicant, appropriate fisheries management measures would be ecologically beneficial compensation for several seabird species including kittiwake, gannet, guillemot and razorbill. Therefore, the progression of one compensatory measure could be beneficial to several species from the same SPA.	The Applicants do not consider prey enhancement through fisheries management (including buying fishing vessel licences) to be a viable compensation measure for the reasons explained in REP6-046. The Applicants have discussed this matter with both Defra (meeting held on the 9 <sup>th</sup> March 2021) and Natural England (workshop with NE and the MMO
11	We understand the Applicant's position that because fisheries management is under government control and therefore action would need to be taken to enable a more strategic approach to providing this ecologically beneficial compensatory measure. To some degree we agree with this position, however, we do not believe that this is insurmountable.	<ul> <li>held on 10<sup>th</sup> March 2021) and welcome Natural England's clarification that <i>"certain mechanisms related to increasing prey availability might require a Government led and/or strategic response".</i></li> <li>The Applicants remain open to supporting the principle of such measures but emphasise that there is currently no mechanism for the Applicants to provide practical support. Defra agreed with the Applicants position when discussed</li> </ul>
12	We agree with the Applicant that in the case of kittiwake, compensation should not be used to address issues that are causing designated habitats or species to be in an unfavourable condition. However, there is limited evidence available that can quantify the extent to which prey availability is causing the unfavourable condition alone. Therefore, increased fisheries management as a compensatory measure through increasing prey availability is considered to have the potential to go above and beyond site management measures and address the impacts of developments.	during the meeting held on the 9 <sup>th</sup> March 2021.
13	It is important to highlight that Natural England considers prey availability of key importance, and therefore recommends that this measure be part of a sustainable package of measures in providing compensatory measures. Given evidence of widespread declines in kittiwake productivity and abundance, provision of additional nesting opportunities	



ID	NE Comment	Applicants' Comments
	for kittiwake in isolation carries a significant degree of uncertainty of long-term success if prey availability issues are not also dealt with.	
14	Natural England maintain that in identifying compensatory measures to increase kittiwake productivity (and other seabird species) through increased prey availability needs to be kept under consideration, even if there are challenges with delivering this in the short term. Natural England acknowledges that certain mechanisms related to increasing prey availability might require a Government led and/or strategic response; however this does not preclude the Applicant's involvement in such a response.	
15	Additionally, it is possible that there are options to increase prey availability that have not yet been fully explored, that could more easily be delivered through mechanisms that are less reliant on a Government led/strategic response, for example buying fishing vessel licences and not using the quota	
16	We note that Annex 1 of this document is a summary and update of the review of prey availability compensation mechanism by Ørsted for the Hornsea Three project. We have provided a link to Natural England's response to BEIS dated 2nd November 2020 <sup>2</sup> . Natural England can provide further comment on the Applicant's update and the fisheries options at the next deadline.	
17	We acknowledge the challenges of relying on regulator-led approach to achieve a deliverable compensatory measure within the timeframes required. Nevertheless, whilst we appreciate why only the provision of artificial nest structures are proposed by the Applicant, Natural England	The Applicants do not consider that prey enhancement through fisheries management is a viable compensation measure for the reasons explained in REP6-046. This was discussed with NE at the workshop on compensation measures on 10 <sup>th</sup> March 2021.

<sup>2</sup> https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003257-Natural%20England.pdf



ID	NE Comment	Applicants' Comments
	maintains that such a measure would be significantly enhanced if this formed part of a package that also seeks to improve prey availability for birds using those structures.	
Ар	pendix 1: Kittiwake from the Flamborough and Filey Coast (FFC) SPA	
18	<b>Conservation Objectives</b> Natural England's position regarding the 1987 count data and the evidence base that supports this position and its continued use is set out in a Natural England Evidence Statement (2020) <sup>3</sup> .	Noted
19	Quantification of effect Natural England has agreed that the project alone will not result in AEoI. However, as noted above, it should be demonstrated the degree of compensation required would be able to address the upper 95% confidence estimate of mortality given the level of uncertainty regarding impacts.	The Applicants have updated the Offshore Ornithology Without Prejudice Compensation Measures document at Deadline 8 (document reference ExA.AS-8.D8.V2) to consider compensation requirements based on 95% confidence intervals of mortality. It should be noted that this makes no material difference to the proposed compensation, since the difference between the mean and upper 95% confidence estimates is from 0.7 to 1.3 (EA1N) / 0.4 to 1.4 (EA2). These therefore remain extremely small compensation targets which will be comfortably achieved with the current proposal. The Applicants also note that the SoS decision in respect of the Hornsea Three project was on the basis of the mean values when considering the number of individuals to be compensated for.
20	Quantification of effect Natural England considers that there is an AEoI of this feature due to in combination collision mortality. The contribution is 1.7 birds from EA2	Noted

<sup>&</sup>lt;sup>3</sup> Natural England Evidence Statement Regarding Kittiwake Count Data Used to Classify the Flamborough Head & Bempton Cliffs SPA - EIN050



ID	NE Comment	Applicants' Comments
	per annum and 0.7 birds per annum from EA1N, out of a total of 359 birds per annum if Hornsea 4 is excluded, and 515 per annum if Hornsea 4 is included. Natural England notes that we have already advised at Hornsea 2 and East Anglia 3 examinations onwards that it was not possible to rule out an AEoI on the FFC SPA from operational and consented projects due to the level of annual in-combination collision mortality predicted for kittiwake.	
21	Provision of artificial nest sites	See ID 17
	We note that this is the only measure proposed to be taken forward by the Applicant. We do not consider it is appropriate to restrict the potential compensation for kittiwakes at the FFC SPA to just the option of providing artificial nesting sites at this this time. The compensatory measures/adaptive management should extend to the delivery of the most ecologically beneficial proposals, which should include improving prey availability, as a means of ensuring the measures are successful throughout the lifetime of the project.	The Applicants reiterate that, as discussed with Natural England, prey enhancement through fisheries management is not a viable compensation measure for the Projects, which Defra agreed with (see ID10). The Applicants have included an additional measure relating to reducing potential seabird bycatch in fisheries within the updated Offshore Ornithology Without Prejudice Compensation Measures document at Deadline 8 (document reference ExA.AS-8.D8.V2).
22	<b>Provision of artificial nest sites</b> One aspect of particular concern with the proposal is that the broad locations of the artificial nest structures proposed are the same as those suggested by other offshore windfarms. This is a concern because without certainty regarding specific structures in specific locations, and lack of detail regarding the mechanism for two or more projects to collaborate, it is unclear whether all the projects will be able to deliver their compensation commitments. It is therefore important that a more detailed package of specific measures is submitted during the examination. As set out in Issue Specific Hearing 3 and REP4-088, Natural England has raised concerns about Lowestoft as a potential location for artificial structures,	The Applicants have included detail on the potential measures that will be taken to secure collaboration with other projects / potential for strategic approaches to compensation where this is considered to be appropriate within the updated Offshore Ornithology Without Prejudice Compensation Measures document at Deadline 8 (document reference ExA.AS-8.D8.V2).



ID	NE Comment	Applicants' Comments
	and other locations will also have practical constraints that need further exploration.	
23	<ul> <li>Provision of artificial nest sites</li> <li>As regards the ecological rationale for the measures, there are several areas where there is uncertainty or further detail is required, including: <ol> <li>Consideration of the availability of new recruits to use the structures. It is unclear to what extent the proposed compensatory measures will provide 'new' recruits to the breeding population that otherwise would not have bred in that year, or the provision of superior nesting locations than otherwise might have been available, leading to improved productivity of birds that would otherwise have failed in their breeding attempt or experienced low levels of success. It is of course possible that both mechanisms would be in operation.</li> <li>Consideration to the likely rate of structure colonisation. There is evidence that bespoke structures are not always colonised – for example one of the 'kittiwake towers' on the Tyne was not colonised and was demolished, and at least one of the structures at Boulogne has not been used.</li> </ol></li></ul> <li>Assessment of the likely rate of colonisation and then increase for bespoke structures: whilst some colonies may show</li>	<ol> <li>The Applicants provided the evidence base for recruits being new breeders and that the new structure will represent additional rather than alternative habitat in the update submitted at Deadline 8 (document reference ExA.AS-8.D8.V2)</li> <li>3 &amp; 4) Lessons learned from the success of other structures will be applied to that proposed by the Applicants with a view to maximising the rate of colonisation. If this should prove to be slower than hoped then through the adaptive management mechanisms to be put in place, steps would be taken to enhance colonisation.</li> </ol>
	immediate and rapid colonisation, this may be more likely to be the case where the existing nest sites have or are being removed. We would welcome a more detailed consideration of the likely rate and the level of colonisation, given artificial structures appear to be rarely 'fully occupied'.	



ID	NE Comment	Applicants' Comments
	<ol> <li>Consideration of suitability of the structure(s). This needs a detailed review of various aspects of structures to determine feasibility and to ensure structures are appropriately designed.</li> </ol>	
24	<b>Provision of artificial nest sites</b> It is not clear if several developers are proposing the same compensatory measures in the same location, and how this will be delivered. We welcome that the Applicant's intention is to work collaboratively and strategically to deliver the compensation measures. However, more detail on how this would work in practice should be provided.	See ID 22
25	Provision of artificial nest sites In addition, the SNCBs believe that it would be worthwhile exploring the opportunities for existing offshore infrastructure being modified to become artificial nest sites and the requirements needed to enable that to be delivered.	Delivering compensation through provision of artificial nesting structures at existing offshore infrastructure is not considered to be a feasible option for the following reasons. To find a suitable location it would be necessary to review and identify existing structures (e.g. ones located at some agreed distance from existing or planned windfarms), reach agreement with the owner/operator about constructing suitable breeding ledges on their structure whilst providing reassurances that breeding birds would not create a health hazard nor impede the operation of the facility and undertake potentially hazardous works in an offshore location, including construction, annual monitoring and also possibly the need to undertake adaptive management. And the same challenges would be faced for the period of the required compensation (e.g. the windfarm operational life). Given the small scale of compensation required by the projects, it is clear that the logistical, technical and health and safety challenges involved in delivering and monitoring an artificial structure at sea, on a structure not connected to the windfarms (to minimise collision risk for recruited birds) considerably outweigh the potential benefits in terms of enabling birds to



ID	NE Comment	Applicants' Comments
		breed in close proximity to foraging areas. For these reasons the Applicants have focussed efforts at onshore options.
Арр	pendix 2: Gannet from the Flamborough and Filey Coast (FFC) SPA	
26	Provision of artificial nest sites and/or establishment of new colonies We note that only one measure is planned to be taken forward: the provision of artificial nest sites and/or establishment of new colonies. The Applicant anticipates that compensation measures will not be required, on the basis that gannet numbers at FFC are far above the population size at designation. However, we advise that it should be noted that the abundance target is caveated by " whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent." (our emphasis).	The Applicants have included an additional potential compensation measure relating to the removal of plastic waste at gannet colonies within the updated Offshore Ornithology Without Prejudice Compensation Measures document at Deadline 8 (document reference ExA.AS-8.D8.V2). The Applicants note the caveat on the abundance target, but question the sustainability of a target which only allows for population growth, even if the population is above the designated size. Furthermore, the Applicants demonstrated in the original assessment that population growth would only be reduced, not halted, by the in-combination mortality. Therefore, neither aspect of this target (maintain above the designated size and avoiding deterioration from its current level) is at risk of not being achieved.
27	<ul> <li>Provision of artificial nest sites and/or establishment of new colonies</li> <li>We advise that rather limited evidence has been provided in support of gannet having successfully used artificial nests sites. In addition, we are unable to advise on the appropriateness and feasibility of this compensatory measures as no information is provided on the size of structure required, likely colonisation, potential recruits, emigration of birds hatched at new colony, expected productivity of new colony birds etc. This detail will need to be provided.</li> </ul>	The Applicants have provided additional detail as far as this is possible to address these comments in the update submitted at Deadline 8 (see <i>section 6.4.2.1.4</i> of document reference ExA.AS-8.D8.V2).
28	Provision of artificial nest sites and/or establishment of new colonies	The Applicants reiterate that identifying suitable candidate locations, obtaining the necessary rights (land, access, etc.) and installing a suitable colony structure are all considered to be feasible undertakings that the



ID	NE Comment	Applicants' Comments
	Additionally, no detail is provided on potential locations of potential structures/new colonies. As stated in the kittiwake section, it is important that a detailed package is submitted during the examination. The level of specific detail provided will be a key factor with respect to confidence in the success of the measures, or how the measures will be secured.	Applicants could achieve within the relatively short time-frame that would be required. Given the very small number of predicted collisions (10.4 / 13.8) the Applicants consider that while this risk of incurring a mortality debt exists, the size of debt for a delay of 1 to 2 years remains extremely small and would readily be recouped within a year or two of the nest site becoming operational. Therefore, since the requirement for the colony to be constructed and colonised four years before windfarm operation is a lower concern for the Projects, it follows that there is also less requirement for the current in-principle compensation plan to contain detailed designs and site locations. Instead, these aspects can be addressed once a decision on the need to compensate for the Project has been made by the SoS.
Арј	pendix 3 and 4: Guillemot and Razorbill from the Flamborough and File	ey Coast (FFC) SPA
29	Rat eradication from breeding colonies We note that only rat eradication from breeding colonies is proposed to be taken forward by the Applicants for both Guillemot and Razorbill. However, the measures are not presented with a sufficient level of detail to enable Natural England to advice on the appropriateness and feasibility of this compensatory measure. Potential candidate sites need to be identified and appraised for their suitability. Therefore, it is critical that appropriate candidate sites that meet specific criteria are identified. Predation by rats is not likely to be the key population driver for guillemot colonies. We acknowledge there is some evidence from Lundy that in certain locations rat eradication may lead to increased productivity, increases in the numbers of occupied nest sites and/or recolonisation of areas. However, given other potentially more important population drivers such as prey availability and climate change, the results will be	Lists of potential sites for both species have been added to the updated document (see <i>sections 7.5 and 8.5</i> of document reference ExA.AS-8.D8.V2).



ID	NE Comment	Applicants' Comments
	highly specific to the location chosen, and therefore potential locations where meaningful increases in productivity could be achieve need to be identified.	
	We agree that rat eradication is not a relevant option at the FFC SPA, but there may be some potential at other colonies, but these need to be identified at this stage. Consideration would need to be given to how close a candidate site is to the FFC SPA, driven by the premise that the closer to FFC the more likely birds may recruit to FFC, though we recognise that other English North Sea auk colonies are not known to be experiencing significant predation issues.	
Арр	bendix 5: Lesser Black-backed gull from the Alde-Ore Estuary SPA	
30	Quantification of effect	Noted. The Applicants do not consider there to be an AEoI at the project-
	We agree that 1.6 birds per annum at EA2 and 0.3 per annum at EA1N will not result in AEoI alone	alone or in-combination level.
	EA2/EA1N does however contribute 3.6% of the total in-combination total of 52.7 LBBG mortalities per annum from the Alde-Ore Estuary SPA. Therefore, we consider that it is not possible to rule out AEoI of this feature due to in-combination collision mortality	
29	<b>New Zealand style predator proof fencing</b> Natural England agrees that measures to reduce the egg and chick predation by mammals is likely to be the most ecologically beneficial	The Applicants welcome the NE position that predator proof fencing is agreed in principle as a suitable compensation option to take forward for this site and species.
	measure to take forward. Therefore, the proposal of installing New Zealand style predator proof fencing (as opposed to more traditional electric post-and-wire fencing used to manage impacts on seabird colonies) is agreed in principle. We also agree that the priority area within the Alde Ore Estuary SPA where measures will be most effective	The Applicants do not consider that it is practical to consider candidate locations within the remaining timescales of the examination. If it is deemed by the SoS that compensation is required for LBBG then a detailed scoping exercise for candidate locations will be undertaken in consultation with NE.



ID	NE Comment	Applicants' Comments
	is Orford Ness. However, it would increase the confidence in the measures if specific candidate locations for such fencing in that area could be identified and appraised.	The Applicants welcome NE's initial comments and note that they recently had a meeting with Defra to discuss potential compensation options. It is the Applicant's understanding that NE have proposed a measure similar to that
	We acknowledge that provision of predator-proof fencing for the benefit of SPA species has the potential to provide orders of magnitude greater than the risk from EA2/EA1N developments in isolation.	proposed by the Applicant and the intention is to have discussions with the Applicant, Vattenfall (for Norfolk Boreas), NE and Defra to consider the potential for a collaborative solution.
	The idea of a proportionate approach where EA1N and EA2 contributes in proportion to their share of the predicted impact seems reasonable. It will be necessary to take account of the uncertainty in the in-combination predicted impact totals and of EA1N and EA2's individual contribution to the total. We note that delivery of this measure is dependent on further discussions with other stakeholders, including the landowners, and DEFRA as this would involve a strategic approach for delivery. If the proposal is to work collaboratively with other developers such as Norfolk Boreas Ltd, then further detail will be required on the mechanism on how these joint projects are to be delivered.	Therefore, the Applicant has updated the offshore ornithology 'without prejudice' compensation measures document at Deadline 8 (document reference ExA.AS-8.D8.V2) to reflect the potential for a strategic approach in relation to LBBG compensation measures.
	Natural England consider that it is achievable to have a suitable location identified and a predator proof fence erected before the construction of the windfarm.	
Ар	pendix 6: Red throated diver from the Outer Thames Estuary SPA	
29	Quantification of effect	The Applicants have responded to NE's REP4-087 within REP5-015. The
	Natural England's view is that an AEoI from EA1N alone cannot be ruled out. We note that the Applicant's modelling approach has found that	Applicants do not consider there to be an AEoI on the RTD feature of the OTE SPA.
	existing windfarms displace birds 7-8km, however as outlined in REP4- 087 we consider that the modelling is likely to be underestimating the true extent of displacement.	The Applicants have also responded to NE's legal submission on RTD displacement [REP4-089] within REP6-020.



ID	NE Comment	Applicants' Comments
	In-combination effects from displacement on the Outer Thames Estuary SPA are likely to be under-estimated to an even greater extent. The issues Natural England has raised with the in-combination assessment are detailed in REP4-087 and in NE's legal submissions concerning red throated divers [REP3-049]. As there is evidence from London Array that displacement within the Outer Thames Estuary extents out to 11.5km we maintain that EA2 should be included in the incombination assessment.	Regarding the potential impact of East Anglia TWO, the Applicants have updated section 5.2 of the Displacement of Red-throated Divers in the Outer Thames Estuary SPA assessment (document reference ExA.AS-10.D8.V4) at Deadline 8 to include an assessment of the project alone impact using NE's recommended approach. This assessment concludes that no more than 0.5 individuals might suffer mortality (at a 10% mortality rate) and that the <i>effective</i> area over which displacement could occur based on NE's approach equates to 0.075% of the SPA area.
		Given the project alone conclusion for East Anglia TWO, the Applicants have not included this project in the in-combination assessment as its contribution even using NE's precautionary approach to effective area of displacement would not materially add to the in-combination effect.
	Navigation management	As acknowledged by NE it is difficult to compensate for non-breeding RTD
	As stated in Natural England's Interim Comments on Requirement for Compensatory Measures [REP4-088], we identified the removal of anthropogenic pressures within the SPA as a potential measure. Management of vessel traffic was provided as one example of reducing anthropogenic influences and impacts from disturbance. However, management of vessel traffic is the only measure proposed by the Applicant. Furthermore, the proposals are based on all vessels operated by SPR for East Anglia projects, which is likely to be a tiny fraction of the total shipping traffic.	associated with the OTE SPA. Therefore, the Applicants have put forward a practical measure which goes above and beyond the measures proposed in Best-Practice Protocols for Minimising Disturbance to RTD that the Applicants have seen for other windfarm projects including East Anglia ONE and East Anglia THREE (noting that this proposed compensation measure has incorporated project vessel traffic management for East Anglia THREE). The measures provided are firm commitments rather than being broad objectives and commit East Anglia THREE to avoiding vessel transits
	Whilst we agree with the Applicant that this measure would not address the current levels of displacement within the SPA, we disagree that management of existing and planned vessel traffic in association with SPRs interests in the area would represent a reduction. This is because EA1N and EA2 have committed to a best practice protocol to minimise	through the OTE SPA during the winter period during construction of the projects and during the entire operational period (unless in the interests of health and safety this cannot be avoided). This measure would not have formed part of the original best-practice protocol.



ID	NE Comment	Applicants' Comments
	<ul> <li>vessel disturbance [REP3-074]. A similar protocol is in place for East Anglia ONE. This includes: <ul> <li>Avoid and minimise vessel traffic, where possible, during the most sensitive time period for red-throated diver between November and March 1st inclusive.</li> <li>Restrict vessel movements where possible to existing navigation routes (where the densities of divers are typically relatively low).</li> <li>Where it is necessary to go outside of established navigational routes, avoid rafting birds either on route to the windfarm sites from port and/or within the windfarm sites (dependent on location) and where possible avoid disturbance to areas with consistently high diver density. 42.</li> </ul> </li> <li>Therefore, Natural England's advice is this proposal does not provide any means of reducing the displacement effects from the presence of the turbines.</li> </ul>	Based upon analysis from Anatec there are approximately 75,000 vessel transits recorded by Automatic Identification System (AIS) within the SPA annually. Removing the potential additional 15,000 construction transits and 4,000 annual operation and maintenance transits represents a significant reduction (in the case of O&M phase an approximately 5% reduction (4,000 out of 83,000 total transits)). The Applicants do not consider that it is feasible to manage non-project vessel traffic throughout the entire or even part of the SPA. This is without precedent and may also represent safety of navigation issues through for example changes to well established routes.



#### 3 Applicants' Comments on NE Appendix A14b [REP7-070] – NE's Response on Legal Submissions Concerning Displacement of RTD [REP6-020]

mmary of NE's Position	
<ul> <li>Introduction</li> <li>This document provides Natural England's response in relation to the following documents:         <ul> <li>Applicants' Response to Natural England's Legal Submissions Concerning Displacement of Red-Throated Divers In the Outer Thames Estuary Spa [REP6-020]</li> <li>Displacement of Red-Throated Divers in the Outer Thames Estuary SPA [REP6-019]</li> <li>TRACKED changes version of Displacement of Red-Throated Divers in the Outer Thames Estuary SPA [REP6-019]</li> <li>TRACKED changes version of Displacement of Red-Throated Divers in the Outer Thames Estuary SPA [REP6-019]</li> <li>TRACKED changes version of Displacement of Red-Throated Divers in the Outer Thames Estuary SPA [REP6-019] (submitted as Appendix A18 by NE at Deadline 7)</li> </ul> </li> <li>This brief note outlines Natural England's reaction to the above documents, submitted by the Applicant at Deadline 5. It welcomes substantial areas of legal common ground, but wishes to flag up a significant change of position that the Applicant's experts have recently made, apparently on the basis of 'further legal review' and which, in other kinds of proceedings, would be subject to cross-examination. Natural England submits that it has not made any errors of law and advises the Examining Authority to consider taking its own legal advice on the respective positions of the Applicant and Natural England</li> <li>Effective loss of Red-Throated Diver ('RTD') habitat within the Special Protection Area ('SPA')</li> </ul>	REP3-049 contains the first discussion of this concept by the Applicants. The first mention in <i>paragraph 43</i> is of 'effective area of the SPA which would be subject to displacement', in each of the <b>Tables 5 – 8</b> the column titles are 'effective area of displacement' and again in <i>paragraph 44</i> the discussion ends with 'total effective area of the SPA estimated to be subject to displacement'. It is only in the table headers that effective habitat loss is used and then a few places subsequently. In the Deadline 5 version (REP5-025) this pattern is repeated and in the majority of cases it is an area of displacement that is referred to. Following NE's comments and further review of the report the inconsistency was highlighted, and it was considered prudent to ensure that a consistent approach was used, hence the revised version. The Applicants provided the track change version of the report to NE for transparency. The original inconsistency was a simple mistake and given the time pressures of the examination was not picked up. The authors are clear that there is no habitat loss as the effect is temporary and dynamic (the birds are not constantly displaced from the same locations or to the same extent (as shown by the differences in results between 2013 and 2018), the birds are a highly mobile species. The Applicants reserve the right to update documentation to correct errors and ensure clarity. See also Appendix 1 of Applicants' Responses to Hearing Action Points (ISH10, ISH11, ISH12, ISH13, ISH14, CAH3 and ISH15) [ExA.HA.D8.V1] and <i>Applicants' Written Summary of Oral Case (ISH14)</i> ExA.SN5.D8.V1]



ID	NE Comment	Applicants' Comments
	The Applicant's document "DISPLACEMENT OF RED-THROATED DIVERS IN THE OUTER THAMES ESTUARY SPA" version 01, dated 15th December 2020 provides evidence that displacement of RTD by windfarms causes "effective habitat loss". This is explicitly stated at its paragraphs 43 and 44, Tables 5, 6, 7 and 8 and paragraphs 77 and 89. It was on the basis of this evidence, and its own scientific views, that Natural England's Legal Submission of 13th January 20211 drew the natural conclusion that "If windfarms deny RTD access to parts of the SPA that would otherwise be suitable for them the effect is to diminish the functional size of the SPA, contrary to conservation objectives." Natural England repeats that assertion.	
	Version 02 of the same document, dated 3rd February 2021, repeats the version 01 references to "effective habitat loss" for RTD, this time at paragraph 59, Tables 6, 7, 8 and 9 and paragraphs 71, 72, 93 and 1052	
	However, version 03 of this document, dated 24th February 2021 contains what are described as "Minor revisions following further legal review". Natural England has submitted at Deadline 7 Appendix A18 the Applicant's document3 tracking the changes made by Applicant in the move from version 02 to 03. In Natural England's view, the majority of these revisions are more than minor, because they amount to a fundamental change of scientific opinion from the earlier position that displacement may cause "effective habitat loss" to denial that this is the case. See paragraph 59, Tables 6, 7, 8 and 9 and paragraphs 71, 72, 93, 105. It is Natural England's submission that the first two versions of this document are to be relied upon as the scientific conclusions of the Applicant's expert ecologists and that version 03 has been produced, not as a result of improved data or analysis, but as a result of advice explaining the legal consequences of this opinion.	



ID	NE Comment	Applicants' Comments
	The Applicant's legal advisors seek to justify the change from "effective loss of habitat" to "effective area of the SPA subject to displacement" as a clarification of something that is prone to being misunderstood. This is unconvincing, as the original wording is easily understood and was chosen by the Applicant's experts as correct in multiple places in the first two versions of the report, which is clearly and professionally worded throughout.	
2	Whether disturbance of RTD is capable of leading to an effective loss of habitat for them in the SPA is, of course, a matter of scientific evidence rather than law. Natural England submits that the Applicant's experts were right about this concept from the start and that their change of mind is not a result of improved science.	See Appendix 1 of Applicants' Responses to Hearing Action Points (ISH10, ISH11, ISH12, ISH13, ISH14, CAH3 and ISH15) [ExA.HA.D8.V1] and Applicants' Written Summary of Oral Case (ISH14) [ExA.SN4.D8.V2].
	The Applicant's legal advisors say, at paragraph 24 of their response to Natural England's Legal Submissions, that there is no evidence for RTD being "denied access to part of the SPA which would otherwise be suitable for them". This analysis wrongly equates the word "denied …" with "being fenced out of …" and is at odds with the Applicant's experts' own conclusions that displacement causes "effective habitat loss", meaning that while the amount of habitat will not change the amount of benefit that it can yield for RTD is diminished, so that a quantity of its habitat function is lost.	
	The legal consequences of the scientific conclusions of versions 01 and 02 of the Applicant's document were set out at paragraphs 10 to 13 of Natural England's Legal Submissions of 13th January, which it stands behind. Further, Natural England refers to Bagmoor Wind Ltd v The Scottish Ministers [2012], concerning the displacement of eagles within	



ID	NE Comment	Applicants' Comments
	an SPA by a windfarm. It was there said that "It was common ground that the eagles would tend to shy away from use of the wind farm and that constructing the wind farm would represent a loss of foraging ground. The area of the wind farm was a modest 5.6 hectares, but once the 500 metre "buffer" zone was included, this figure would be multiplied almost tenfold. The 170 hectares of the tongue would also fall to be classified as lost habitat." Emphasis added.	
3	2. Conservation objectives Natural England is in full agreement with the Applicant's legal advisors when they say that consideration of adverse effect on the integrity of the SPA should start with the conservation objectives for the SPA. Three of those objectives are engaged by issues of effective habitat loss. It is right to say that the test of what amounts to an adverse effect on integrity should be broad and not mechanistic, and that the simple fact of an element of disturbance is not of itself enough to prove adverse effect on site integrity.	NE state that three of the conservation objectives relate to habitat loss, however as pointed out by the Applicants in REP5-015, references to habitat derive from an aim to avoid ' <i>affecting the long-term viability of the population</i> ' through impacts on the habitat, rather than to specifically safeguard the habitat in its own right. The habitat is not designated – the population of red-throated diver is.
4	3. The BEIS review of consents	Noted
	Natural England does not suggest that paragraph 16.5 of its Legal Submissions of 13th January mean that the Examining Authority and the Secretary of State should conduct their own review of consented projects in the area, though of course they should take into account the actual effects of those projects on RTD.	



ID	NE Comment	Applicants' Comments
5	4. Favourable conservation status Natural England agrees that the question of whether or not a site or a species is in favourable conservation status is a matter for the decision- maker at the time when a decision is being made. Such a decision will, of course, be informed by Natural England's most recent assessment of condition status. Where, as here, no formal condition assessment has been undertaken the duty on the decision-maker is to reach its own conclusions, based on the evidence available and including views given by Natural England in the course of an individual application.	The Applicant contends that, at a minimum, the maintenance of the population at its current size (if it is assumed that the original visual aerial surveys missed two thirds of the birds) or the fact that it has increased threefold (if it is assumed that the original visual aerial surveys recorded all birds present) indicates the SPA is in favourable condition or status. Indeed, it is unclear on what basis NE has reached the alternative conclusion given positive population trend (or maintenance). NE accepts that no formal condition assessment of the site has been undertaken.
6	5. Natural England's advice Natural England's advice, as the appropriate national conservation body, should be accorded "considerable weight", and should only be departed from for "cogent and compelling reasons". R (Akester and Melanaphy) v Department for Environment, Food and Rural Affairs (1) Wightlink Limited (2) and others [2010] WEHC 232 (Admin).	NE refers to the <i>Akester</i> case <sup>4</sup> which confirms that weight should be given to NE's views however this case has been quoted out of context by NE. In <i>Akester</i> , the relevant competent authority rejected NE's views without adequate reasons or scientific evidence as to why NE's views were not accepted. This is very different to the present circumstances in which a great deal of scientific evidence has been presented to support the Applicants' position. The Applicants also note that paragraph [105] of the judgement makes it clear that NE's views are not determinative. Rather, they assist as to the nature and extent of the differences of opinion between experts. For further details see Appendix 1 of ExA.HA.D8.V1 and <i>Applicants' Written</i> <i>Summary of Oral Case (ISH14)</i> [ExA.SN4.D8.V2].

<sup>&</sup>lt;sup>4</sup> R. (on the application of Akester) v Department for the Environment, Food and Rural Affairs [2010] EWHC 232 (Admin)

#### SCOTTISHPOWER RENEWABLES

#### 4 Applicants' Comments on NE Appendix C8 [REP7-073] – NE's Response to the Ecology Survey Results [REP6-035]

ID	NE Comment	Applicants' Comments
Sum	nmary of NE's Position	
1	At this time Natural England believes it would be inappropriate to provide further scientific advice based on this survey alone due to survey limitations.	The Applicants are disappointed that NE continues to question the classification of the woodland at the Hundred River crossing despite the evidence provided by the Applicants.
2	Whilst Natural England notes the Applicants want to be helpful in providing the necessary evidence, unfortunately the survey hasn't followed standard best practice in relation to the timing and ground conditions. Many vegetation species are only evident in spring or summer and these are really important in identifying the habitat type and its quality. To have the degree of confidence required in habitat surveys at this time of year we would expect a botanist with FISC 5/6 would undertake the survey.	All surveys undertaken to date have been in accordance with the 'Extended Phase 1' methodology as set out in Guidelines for Baseline Ecological Assessment (Institute of Environmental Assessment, 1995) and by suitably qualified professional ecological surveyors. Across the ecological profession, it is accepted that Phase 1 habitat surveys can be conducted all year round. However, the Applicants acknowledge that the optimum time to have undertaken the February 2021 survey would have been between April and September. The Applicants also acknowledge that follow-up botanical surveys can be required to supplement Phase 1 habitat surveys undertaken
3	In addition, for undertaking surveys at the appropriate time of year and appropriate level, we advise that a National Vegetation Classification survey might be required to prove or disprove the quality of the habitats.	at sub-optimal times of year, but this is subject to the findings of the Phase 1 and whether the surveying ecologist deems further data is necessary to reach a robust conclusion. It is important to note that the primary aim of the February 2021 survey was to verify the habitat classification assessment of
4	<ul> <li>Whilst the Applicant believes that the February 2021 survey supports their characterisation surveys, there remains uncertainty and significant time has elapsed since the surveys undertaken to support the environmental statement. Therefore, it may be of help to the Applicant to consult the following as there may be existing evidence to support their surveys:</li> <li>a) Local Record Centre to check for species records.</li> </ul>	the area already undertaken in April 2018. Whilst the Applicants are not aware if Natural England has visited this a it is understood that it agrees with SEAS' conclusion that the woodland



ID	NE Comment	Applicants' Comments
	b) the Vice-county BSBI recorder - they will have likely visited the area as part of the current Atlas project where they recording all plants on a tetrad basis (and they will have visited at a good time of year within the last 2-3 years). The data may or may not be submitted to the local record centre, https://bsbi.org/local- botany. The https://bsbi.org/maps can be accessed by anyone to obtain a plant site list.	survey did not follow standard best practice in relation to timing and ground conditions should certainly apply to SEAS' submission also. The Applicants maintain that the woodland at the Hundred River crossing is semi-natural broadleaf woodland. This conclusion is supported by the independent site visit undertaken by the Councils, as confirmed verbally at Issue Specific Hearing 7 and subsequently by ESC in its written submission at Deadline 6 (REP6-075). ESC states <i>"we agree with the habitat characterisation of area as set out in the ES. We do not consider that the</i>
		area within the red line boundary is wet woodland as defined by the JNCC".



#### 5 Applicants' Comments on NE Appendix F9 [REP7-074] – NE's All Other Matters Update

ID	NE Comment	Applicants' Comments	
Out	utline Sabellaria Reef Management Plan [REP6-039, REP6-040]		
1	Natural England notes that the majority of the amendments to this plan are in Section 4. Even with the amendments Natural England advises that there remains considerable uncertainty around the likelihood of buffers being encroached upon and to what degree. Therefore, our advice remains unchanged in relation to the confidence that micrositing around Sabellaria reefs is achievable. Given this matter is unlikely to be progressed further during examination, the ExA and decision makers will be required to make a risk based judgement on whether or not they feel that impacts to Sabellaria spinulosa reef can be suitably avoided and/or mitigated.	The Applicants consider that the Outline Sabellaria Reef Management Plan provides sufficient control for the management of impacts on <i>Sabellaria</i> reef and that where there is potential for interactions to occur, a robust process to ensure that potential impacts are minimised as far as possible will be put in place. The Projects are not located within an area protected for benthic habitats.	
	hore In-Principle Monitoring Plan [REP6-015, REP6-016]		
2	<ul> <li>1.1 General</li> <li>Natural England would welcome confirmation from Applicant's that any monitoring required in relation to compensation measures will be included in the compensation packages rather than in the IPMP.</li> <li>We note that at Paragraph 15 that the focus remains on EIA concerns</li> </ul>	The Applicants can confirm that any monitoring required in relation to compensation measures will be included in the compensation packages rather than in the IPMP. The Applicants added the reference to compensation monitoring to the IPMP in response to NE's comments in REP5-086 to highlight that there may be additional measures required that are not captured in the IPMP.	
	<ul> <li>and not with no mention to monitoring of residual impacts to designated sites. Though we do note that the proposed monitoring is likely to address the majority of these without explicitly saying so.</li> <li>While not specific to Natural England's remit, Natural England welcomes the sandeel monitoring and would be interested to see the results as this</li> </ul>	The Applicants agree with NE that although paragraph 15 specifies EIA- level effects, these are likely to address HRA issues also. However, the IPMP submitted at Deadline 8 (document reference 8.13) has been updated to refer to effects relating to the Information to Support Appropriate Assessment report.	



ID	NE Comment	Applicants' Comments
	may also determine prey availability for Annex I and Annex 2 species from designated sites.	The Applicants can provide the results of the sandeel habitat suitability monitoring to NE.
3	<ul> <li>1.2 Benthic Ecology</li> <li>Natural England welcomes the inclusion of text to demonstrate avoidance and the acknowledgement that there may be a requirement for more than one survey post construction. But we note there is no reference to this relating to understanding reef recovery.</li> <li>We also welcome the commitment to undertake a second Annex I reef survey should there be a gap of more than 18 months between the survey to inform UXO clearance and start of construction.</li> </ul>	The Applicants consider that through the development of a detailed reef monitoring plan in the final Monitoring Plan, the specific process to measure reef recovery will be agreed with the MMO in consultation with NE. However, the IPMP submitted at Deadline 8 (document reference 8.13) has been updated to refer to reef recovery.
4	<ul> <li>1.3 Marine Mammals</li> <li>Table 4, first row – Natural England advise the term 'statistically' should not be included here. Natural England have recently had a discussion with Cefas and MMO and it was concluded that 'significantly' should not be assigned a threshold quantity. The consensus between NE and CEFAS is there are too many variables to come up with a standardised threshold for what is significant. It would vary greatly due to water depths, substrates, receptor, location etc. The decision to stop or allow piling to continue would need to be made on a case by case basis using expert judgement.</li> <li>Table 4, second row – Natural England welcomes the commitment outlined here to work with the other East Anglia Zone projects and looks forward to working with the Applicant to achieve this, as appropriate.</li> </ul>	The IPMP has been updated at Deadline 8 to remove 'statistically'. In addition, the construction noise monitoring condition has been reverted to the original wording which has resulted in the removal of 'statistically' from the DMLs.
5	1.4 Offshore Ornithology	Noted



ID	NE Comment	Applicants' Comments
	Natural England welcomes that EA2 IPMP has been updated to include RTD measures.	
Outl	ine Landfall Construction Method Statement [REP6-022, REP6-023]	
6	<b>1.5 General Comments</b> How will Natural England's Offshore windfarm project team and the MMO be consulted by the Local Planning Authority?	The Applicants have updated the draft DCO at Deadline 8 to include NE and the MMO as a consultee on the Landfall Construction Method Statement.
7	<ul> <li><b>1.6 Specific Comments</b></li> <li>(3) Natural England requests that the finalised Landfall Method Statement is submitted to the relevant regulator/s in consultation with relevant SNCB. Because whilst we may have been consulted beforehand through our Discretionary Advice Service, our statutory remit remains.</li> </ul>	See ID 6
8	<ul> <li>(3) Natural England notes that for most other OWF projects, excluding EA1 and EA3, the MMO has been the lead regulator due to environmental issues normally occurring below Mean High Water (MHW). We would welcome MMO's consideration of how this will work in practice, with Local Planning Authorities (LPAs) leading on Horizontal Directional Drilling (HDD) activities.</li> </ul>	See ID 6
9	(6) How will MMO be incorporated in the decision making for marine elements of HDD?	
10	(11) Please be advised that experience has shown that the feasibility of HDD is often based on sediment type and even short sections of HDD (~1km) can fail e.g. Lincs OWF 2010. It should also be noted that in recent years there have been issues with sinkholes e.g. Hornsea 2 and	The Applicants have employed leading HDD consultants throughout the feasibility and iterative design stages of the Projects. Pre-commencement survey work will refine the detail of the nature of HDD works and the specification of the equipment to be used. The consultants consider that



ID	NE Comment	Applicants' Comments
	Triton Knoll. And even though the sediment conditions are different, lessons must be learnt to make sure that it won't happen here. This should be considered in the HDD verification note.	the key ground formations are suitable for HDD and therefore as described in the HDD Verification Note (REP6-024), the Applicants consider that HDD is a viable option.
11	(26-28) 4.2.2 we note that this section has been included due to impacts to local people, with a commitment to locate machinery to reduce noise. However, we query what would happen if there is conflict between reducing noise and increasing ecological issues in the placement of the equipment?	If this potential issue were to arise then the Applicants would seek to consult with all relevant parties to agree the most appropriate course of action at the time.
12	Annex 2 – Monitoring: the monitoring is of coastal processes and remedial action, both are relevant to Natural England and MMO, how will consultation be undertaken?	The Applicants have updated the draft DCO at Deadline 8 to include NE as a consultee on the Landfall Monitoring Plan.
13	(16) Whilst, Natural England did not specify the monitoring being undertaken, we agree with the proposals to use the ARCMP data and therefore query if the Applicant will fund the continuation of the surveys (if required)?	No, the outline Landfall Construction Method Statement confirms that the Applicants will utilise ARCMP data where available, and where not available the Applicants will undertake their own surveys.
14	(22) Natural England queries who will receive the monitoring reports? This data could help inform SSSI site management in this area.	As specified within the updated outline Landfall Construction Method Statement submitted at deadline 8 (ExA.AS-2.D8.V3), each Landfall Monitoring report will be submitted to ESC and Natural England
Hori	zontal Directional Drilling Verification Clarification Note [REP6-024]	
15	Natural England welcomes this document and believe that the feasibility review should be updated once preconstruction surveys are completed. This therefore should be a named plan on the DCO/dML.	The Applicants do not consider this to be necessary as the results from the pre-construction surveys will inform the final design (including tolerances) which will be included within the final Landfall Construction Method Statement,