



THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES
2010

Appendix E to the Relevant Representations of Natural England
Benthic and Intertidal Ecology

For:

The construction and operation of the Five Estuaries Offshore Wind Farm located approximately 37km from the Suffolk Coast in the Southern North Sea.

Planning Inspectorate Reference EN010115

13 August 2024

Appendix E – Benthic and Intertidal Ecology

In formulating these comments, the following documents have been considered:

- [APP-040] 5.4 Report to Inform Appropriate Assessment
- [APP-041] 5.4.1 HRA Site Integrity Matrices
- [APP-042] 5.4.2 HRA Screening Report
- [APP-043] 5.4.3 HRA Screening Matrices
- [APP-044] 5.4.4 Summary of Designated Sites
- [APP-058] 5.6 Stage 1 Marine Conservation Assessment
- [APP-063] 6.1.3 EIA Methodology
- [APP-064] 6.1.3.1 Cumulative Effects Assessment Methodology
- [APP-069] 6.2.1 Offshore Project Description
- [APP-070] 6.2.1.1 Detailed Offshore Project Design Envelope
- [APP-072] 6.2.3 Marine Water and Sediment Quality
- [APP-074] 6.2.5 Benthic and Intertidal Ecology
- [APP-102] 6.2.5.4 Main Array and Export Cable Route – Environmental Features Report
- [APP-119] 6.5.5.1 Main Array – Benthic Ecology Monitoring Report
- [APP-120] 6.5.5.2 Export Cable Route and Intertidal Benthic Ecology Monitoring Report
- [APP-238] 9.8 Dredge Disposal Site Characterisation Report
- [APP-239] 9.9 Outline Cable Burial Risk Assessment
- [APP-242] 9.12 Outline Cable Specification and Installation Plan
- [APP-243] 9.13 Margate and Long Sands SAC Benthic Mitigation
- [APP-264] 9.31 Schedule of Mitigation – Routemap
- [APP-265] 9.32 Offshore in Principle Monitoring Plan

1. Natural England's Advice and Recommendations

A summary of Natural England's key concerns in relation to benthic and intertidal ecology is set out in Table 1. Our detailed advice and recommendations are presented in further detail in Table 2.

In order to reduce the repetition in our advice, the advice and recommendations within this appendix, notably regarding sandbanks and sandwaves are applicable to and should be read in conjunction with, the advice presented the Marine Geology, Oceanography and Physical Process Appendix B.

Glossary of Acronyms and Abbreviations

AOS	Area of Search
DCO	Development Consent Order
dML	Deemed Marine Licence
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
ES	Environmental Statement
ExA	Examining Authority
HRA	Habitats Regulations Assessment
HVDC	High Voltage Direct Current
LSE	Likely Significant Effect
MDS	Maximum Design Scenario
NERC	Natural Environment and Rural Communities
O&M	Operations and Maintenance
OTE SPA	Outer Thames Estuary Special Protection Area
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SIS	Secretary of State
SPA	Special Protection Area
WCS	Worst Case Scenario

Please note: This appendix should be read in conjunction with the Summary of Key Environmental Concerns contained within our Relevant Representations.

Table 1 Summary of Key Issues – Benthic and Intertidal Ecology.

NE Ref	Summary of Key Concerns	Natural England's Recommendations to Resolve Issues.	Risk
E1	<p><u>Insufficient evidence</u> Natural England is concerned that the methods and information used to determine maximum length of cable protection within Margate and Long Sands Special Area of Conservation (MLS SAC) are not transparent and appear to be high level, and as such, it is not clear how realistic this Maximum Design Scenario (MDS) is. Natural England advises that due to uncertainty (reasonable scientific doubt) we cannot advise the exclusion of an Adverse Effect on Integrity (AEol). Therefore, there is a need to further quantify the impact to inform the levels of compensation required.</p>	<p>Natural England advises that further information is required to provide the necessary confidence in the MDS/Worst Case Scenario (WCS) for cable protection within the SAC.</p>	
E2	<p><u>Impacts on SPAs</u> Natural England notes that the Applicant's current assessments of pressures/impacts on supporting benthic habitats for Special Protection Area (SPA) features and impacts to prey availability lacks rationale and robustness.</p>	<p>Natural England advises that full consideration of the likely nature, extent, duration, and significance of impacts upon SPA supporting habitats and prey availability is required to inform a robust assessment of the likely impacts upon designated ornithological features.</p>	
E3	<p><u>Worst Case Scenario – Operations & Maintenance (O&M)</u> Natural England highlights that the application documents, including the Report to Inform Appropriate Assessment (RIAA) provide contradictory information relating to the likely requirement for 'additional' scour and/or cable protection over and above that stipulated within the maximum design. It is therefore not clear whether the potential for the addition of further scour/cable protection has been included within the calculations for the MDS/WCS for cable protection within the SAC.</p>	<p>Natural England advises that, the relevant parts of all benthic Environmental Impact Assessment (EIA)/Habitats Regulations Assessment (HRA) assessment conclusions will require review to address this potential inaccuracy in the maximum design/worst case scenario. There is also likely to be implications for level of compensation required.</p>	
E4	<p><u>Report to Inform Appropriate Assessment (RIAA)</u> Natural England does not agree with the Applicant's conclusion of No AEol in relation to MLS SAC which has been designated for Annex I Sandbanks. Acknowledging the Secretary of State decisions for Hornsea Project Three, Norfolk Boreas, Norfolk Vanguard and Dudgeon and Sheringham Shoal where it was determined that the placement of cable protection would have a lasting impact over the</p>	<p>Natural England refers the Examining Authority (ExA) to our advice on the RIAA. While we agree to disagree with the Applicant on the scale and significance of the impact; we welcome the inclusion of the without prejudice benthic compensation measures. We advise that every effort should be made to reduce the impacts through the adoption of robust mitigation measures. Natural England</p>	

NE Ref	Summary of Key Concerns	Natural England's Recommendations to Resolve Issues.	Risk
	lifetime of the project, and potentially beyond, such that an adverse effect alone or in-combination could not be ruled out. The overall condition of the designated site features predicted to be impacted by those protects is not dissimilar to MLS SAC. Thus, we advise that the placement of cable protection within MLS SAC is likely to hinder the conservation objectives for the site and therefore an adverse effect on Integrity cannot be excluded beyond reasonable scientific doubt alone or in-combination.	advises that should further commitments and/or change to project design be made by the Applicant that the impact assessment should be updated.	
E5	<u>Mitigation</u> Natural England advises that mitigation measures fail to consider the potential presence of Section 41 Natural Environment and Rural Communities (NERC) Act 2006 Habitats.	Natural England advises that where possible impacts to Section 41 NERC Habitats are avoided and due consideration is demonstrated.	

Table 2 Natural England's Detailed Advice and Recommendations – Benthic and Intertidal Ecology.

Natural England's Key Considerations	Natural England's Advice				
Relevant and Written Representations	NE Ref	Ref	Comment	Recommendation	Risk (RAG)
<p>Project Parameters - Document(s) Used: [APP-069] 6.2.1 Offshore Project Description [APP-070] 6.2.1.1 Detailed Offshore Project Design Envelope [APP-238] 9.8 Dredge Disposal Site Characterisation Report [APP-239] 9.9 Outline Cable Burial Risk Assessment [APP-242] 9.12 Outline Cable Specification and Installation Plan</p>					
Project Description	6	APP-069 6.2.1 Section 1.14.16 and 1.14.7 & APP-070 6.2.1.1 Table 1.31	Natural England advises that there is insufficient detail in particular on proposed Operation and Maintenance relating to the potential placement of scour prevention/cable protection over the lifetime of the project. There are currently no 'workings out' as to how total seabed disturbance has been calculated from cable repairs and replacement e.g. what is the max, length of any one cable repair, noting that the total number of repairs is 9 and the total length is 5,000m, and how a figure of 20% for cable/sour replacement has been determined and assessed.	Natural England advises that further details should be provided on the parameters for O&M activities including how total amounts have been determined. Natural England advises that previous Offshore Wind Farm applications have assessed for quantities of additional scour and/or cable protection outside of benthic SACs is for the replenishment of scour prevention/cable protection laid during installation within a 10-year period as long as the overall footprint is not increased. However, once construction is completed then a further marine licence would be required for the placement of external protection with benthic SACs. Also please see Annex I to this Appendix on Natural England position paper regarding cable protection on the placement of cable protection.	

Natural England's Key Considerations	Natural England's Advice				
Relevant and Written Representations	NE Ref	Ref	Comment	Recommendation	Risk (RAG)
Natural England's Position on Worst Case Scenario or Scenarios	7	APP-242 9.12 & APP-239 9.9	<p>It is not clear to Natural England what information has been used to determine the maximum length of cable protection required within MLS SAC (i.e. 900 m). It is also not clear whether the potential for the addition of further cable protection has been considered and included within the calculations for MDS/WCS for scour protection within the SAC.</p> <p>These documents are written from an engineering perspective rather than from an ecological one trying to understand the impacts from sub optimally buried cables and potential impacts to designated sites.</p>	<p>In order that a meaningful assessment can be made, Natural England require the applicant to provide a transparent justification for the WCS quantification of benthic impacts within MLS SAC, drawing upon previous experience and available information about the ground type along the ECC route. The WCS should also include any possible post-construction measures such as the placement of additional scour replenishment.</p> <p>Natural England would welcome additional information relating to the WCS volume of cable protection (as well as the total cable length) within Margate and Long Sands SAC so that it is clear to all parties what the thresholds are. Natural England queries how the regulator will be certain that the WCS within the SAC has not been exceeded? If the Secretary of State (SOS) is minded to consent the project, further DCO/dML restrictions may be appropriate.</p>	
	E8	APP-070 6.2.1.1	Natural England advises that without further detail being provided it is hard to determine if the WCS is realistic. For example:	Natural England would welcome further updates to 6.2.1 and 6.2.1.1. to inform review of the impact assessments. Until this happens, we believe that there is	

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			<ul style="list-style-type: none"> • it is not clear if the boulder clearance impacts include depositing of the boulders and if yes in areas with similar boulders. • it is not clear if the area of seabed impacts from UXO clearance has been assessed and the likely recovery. • In Table 1.6 trial trenching is proposed but location, size and timing are not provided (as raised in 4.2.11 of Cable specification and Installation plan) • Table 1.27 It is not clear how 500m³ per tidal cycle has been determined for MDS for HDD mud. • Table 1.28 It is not clear if, as with other projects with HDD at the landfall, cable protection is required at the exit pit locations. • Section 4.7.4 of doc 9.12 it is not clear why the exit pits are so large. 	reasonable scientific doubt regarding the activities with the MLS SAC which have the potential to hinder the conservation objectives for the site both Alone and in-combination.	
	E9	APP-238 9.8	Natural England advises that parameters to determine the dredge disposal criteria other than within the same sediment type have not been included and therefore the WCS may not be realistic.	Natural England advises that in addition to being within same sediment type, commitments should also be made and secured to avoid priority areas and/or key areas of supporting habitats for mobile interest features of designated sites.	

Natural England's Key Considerations	Natural England's Advice				
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	E10	APP-238 9.8	Natural England highlights that evidence to support VE disposal activities includes those permitted and assessed in 2008 and due to the age of this evidence it can no longer be relied upon e.g. LID OWFs.	Natural England highlights that whilst we do not believe it will make a material difference to the assessment for this project, the evidence used would not normally be supported by the SNCBs as set out in the OWF best practice guidance .	
	E11	APP-238 9.8 Table 2.1 and 4.2.16	Natural England notes that there is no differentiation between disposal inside and outside of benthic designated sites. This also applies to what is being deposited and how to ensure that mitigation measures are fit for purpose.	Natural England advises that as mitigation for within designated sites should include deposition in areas with same sediment size/characterisation and use of a fall pipe rather than surface release.	
	E12	APP-238 9.8 6.2.15, 6.2.24	Natural England advises that all impact pathways should consider both EIA and HRA issues, with any disposal not interrupting sediment transport.	Natural England advises that mitigation measures should be considered from an EIA and HRA perspective and that monitoring should be secured to assess whether the residual impacts are as predicted and, if not, then remedial action should be undertaken.	
	E13	APP-242 9.12 4.5.2	Natural England advises that further mitigation measures should be adopted to differentiate between areas inside and outside of designated sites unless a precautionary approach is taken to all installation and operation activities within the assessment.	Natural England advises that the impacts from all types of external cable protection should be addressed refine down options and allow for a realistic WCS to be assessed.	
Baseline Characterisation - Document(s) Used: [APP-074] 6.2.5 Benthic and Intertidal Ecology					

Natural England's Key Considerations	Natural England's Advice				
Relevant and Written Representations	NE Ref	Ref	Comment	Recommendation	Risk (RAG)
Survey Data Acquisition	E14	6.2.5	Natural England has no comments to make that would result in a material difference to benthic receptors at this stage of the process. Therefore, unless there is a change in the project design parameters, we will provide no further comment on the data during examination.	N/A	
Data Gaps	E15	6.2.5	Natural England has no comments to make that would result in a material difference to benthic receptors at this stage of the process. Therefore, unless there is a change in the project design parameters, we will provide no further comment on the data during examination.	N/A	
Analysis, Modelling and Reporting	E16	6.2.5	<p>Natural England has no comments to make that would result in a material difference to benthic receptors.</p> <p>Therefore, unless there is a change in the project design parameters, we will provide no further comment on the data during examination.</p>	N/A	
Environmental Impact Assessment - Document Used: [APP-074] 6.2.5 Benthic and Intertidal Ecology [APP-243] 9.13 Margate and Long Sands SAC Benthic Mitigation [APP-040] 5.4 Report to Inform Appropriate Assessment					

Natural England's Key Considerations	Natural England's Advice				
Relevant and Written Representations	NE Ref	Ref	Comment	Recommendation	Risk (RAG)
Identified impacts	E17	APP-074 6.2.5 APP-040 5.4. Para. 11.2.34	Natural England is concerned that there is a risk of impacting potential Annex I reef features located within MLS SAC and as a NERC (2006) Section 41 Priority Habitats. We highlight that whilst presently Annex I reef is not a listed feature of MLS SAC, there is the potential for it to become a future should its presence be demonstrated. Therefore, we advise that the proposed VE OWF should not preclude its future designation.	Natural England advises that mitigation measures should be adopted to avoid impacts to <i>Sabellaria spinulosa</i> reef from the installation of VE OWF and associated O&M activities.	
Methodology	E18	APP-074 6.2.5 Sections 5.12 and 5.13 (e.g. 55.11.69)	Natural England welcomes consideration of potential impacts on Special Protection Area (SPA) where the benthic habitats serve as supporting habitats for bird features, including the Outer Thames Estuary SPA (OTE SPA) Red-throated diver populations which are present in the project red line boundary and vessel transit route from several local ports which may locate the projects O&M facility. However, we advise that the Applicant's current assessments of pressures/impacts on SPA features is lacks rationale and robustness.	Natural England advises that full consideration of the likely nature, extent, duration, and significance of impacts upon SPA supporting habitats is required to inform a robust assessment of the likely impacts upon designated ornithological features.	
Have the impacts been avoided/reduced by the use of appropriate mitigation?	E19	APP-243 9.13	Natural England notes that the Applicant has ruled out the option to adopt High Voltage Direct Current (HVDC) within the Export Cable Corridor (ECC) to mitigate	Natural England advises that that the Applicant considers further mitigation measures to reduce the project impacts	

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		Table 2.1	<p>impacts on sandbank features, which would reduce the number of cables, based on 'project timescales and supplier issues.</p> <p>In addition, we draw your attention to Annex 2 of this Appendix where the progression of a coordinated approach discussed in more detail.</p>	from transmission asset installation and maintenance.	
Assessment Conclusions	E20	APP-074 6.2.5	Natural England disagrees with the Applicant on the significance of the impacts to MLS SAC interest features and priority habitats.	Please see comments on the RIAA.	
HRA – Document(s) Used: [APP-040] 5.4 Report to Inform Appropriate Assessment [APP-041] 5.4.1 HRA Site Integrity Matrices [APP-042] 5.4.2 HRA Screening Report [APP-043] 5.4.3 HRA Screening Matrices [APP-044] 5.4.4 Summary of Designated Sites [APP-243] 9.13 Margate and Long Sands SAC Benthic Mitigation					
Screening	E21	5.4, 5.4.1, 5.4.2, 5.4.3, 5.4.4.	Natural England advises that all relevant sites have been screened in.	N/A	
	E22	APP-040 5.4	Please see below, where we disagree with No AEoI we also disagree with the Likely Significant Effect (LSE) screening.	N/A	
Assessment	E23	APP-040	Natural notes that the updated Renewable Energy National Policy Statement has not	Natural England advises that the Applicant give further consideration to	

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		5.4 Section 3	been taken into consideration and neither has the updated Defra Policy to support Best Practice Guidance for benthic compensation in MPAs	these policy documents to support the Secretary of State in their decision making.	
	E24	APP-040 5.4 Table 6.1, Para 11.2.5 4, 11.2.8 8 etc.	Natural England notes that the Report to Inform Appropriate Assessment quotes several different figures when describing the worst-case total percentage of Margate and Long Sands SAC predicted to be impacted by the installation of scour protection. Figures range from 0.0008% to 0.02%. It is therefore not clear what figure the assessments and their conclusions have been based upon and what the accurate MDS and WCS figure is.	Natural England advises that further clarification from the Applicant is required (in line with the advice provided within this appendix) to confirm what percentage of the total SAC, as well as percentage of the sandbank feature, has been used to inform the assessments and what the accurate MDS/WCS figures are with appropriate justification provided where relevant. Once this is provided the RIAA and relevant ES should be updated.	
	E25	APP-040 5.4 Section 7.6	Natural England is concerned that there is not an Operation and Maintenance plan that clearly sets out O&M activities. In addition, there uncertainties set on in this Appendix in relation to requiring more detail on O&M activities before we can advise on the sufficiency of the RIAA in assessing the impacts alone and in-combination.	Natural England advises that further detail is required on O&M activities before we can advise on the scale and significance of impacts.	
	E26	APP-040 5.4	Natural England queries why there is limited linkage to the conservation objectives for MLS SAC.	Natural England advises that once the draft updates to the conservation advice packages for MLS SAC is available the RIAA and Benthic ES chapter will need to be updated.	

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		Para. 11.2.5 Section 12	Please note that the conservation advice package for MLS SAC is under review and will be updated in draft form in Autumn 2024 with aim to finalise in March 2024		
	E27	APP-040 5.4 11.2.5 9 and 11.2.1 8	<p>Natural England notes that the application documents, including the Report to Inform Appropriate Assessment provide contradictory information relating to the likely requirement for 'additional' scour protection over and above that stipulated within the maximum design. For example, in paragraph 11.2.59 of the RIAA states 'should additional protection be required', whilst paragraph 11.2.18 states 'Scour will therefore only occur if and where scour protection has not been applied'.</p> <p>It is therefore not clear whether the potential for the addition of further rock protection due to secondary scour has been considered and included within the calculations for the MDS/WCS for scour protection within the SAC. It is therefore not clear whether the RIAA appropriately considers the MDS/WCS.</p>	<p>Given inconsistencies in the information provided by the Applicant, Natural England requires clarification as to whether additional scour protection may be required, and whether any such potential requirements have been included when defining WCS and MDS.</p> <p>Where there is potential for the requirement of additional scour protection, and such requirements have not been included WCS/MDS, the relevant parts of all benthic EIA/HRA assessment conclusions will require review.</p>	
In- combination Assessment	E28	APP-040 5.4	Natural England notes that the list of projects that have a benthic compensatory requirement does not include Dudgeon and Sheringham	Natural England advises that this section of the RIAA is updated to provide the necessary context for the Secretary of State's HRA.	

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		2.5.2	<p>Extension Projects OWFs which have impacts similar to VE.</p> <p>An overarching comment for Section 2 is that East Anglia 1N and East Anglia 2 has not been included in the assessment.</p>		
	E29	APP-040 5.4 Table 9.2 Table 9.5 Para. 12.2.4	<p>Natural England notes that PINS Advice Note 11 has been used to determine Project TIERs. However, the SNCBs advice that these TIERs do not align with best practice guidance and therefore do on take account of ongoing impacts from some projects.</p>	<p>Please refer to Natural England's Best Practice Guidance Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards. Phase III Expectations for data analysis and presentation at examination for offshore wind applications. for the SNCBs advice on using Tiers for scoping project into in-combination assessments.</p>	
Have the impacts been avoided/reduced by the use of appropriate mitigation?	E30	APP-040 5.4 9.13	<p>Natural England advises that further mitigation measures should be explored.</p> <p>We note that in Table 2.1 of the MLS SAC Mitigation document (9.13) this is the same mitigation included within the derogations case document. We highlight that there is insufficient detail included within these documents to have certainty that cables can be buried and will remain buried without the need for cable protection. It is also noted that cable</p>	<p>Please see our other comments in this Appendix highlighting the need to consider further mitigation measures.</p>	

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			<p>protection has not been excluded consistently across all documents to provide the necessary mitigation and ensure removal at the time of decommissioning.</p> <p>We also advise that the shortest route through the SAC does not necessary reduce the impacts. It is important to also consider avoiding the most sensitive habitats and to reduce the impacts and/or enable feature recovery.</p>		
Assessment Conclusions	E31	APP-040 5.4 Table 11.1	<p>Natural England advises that the following need further consideration in the table:</p> <ul style="list-style-type: none"> - UXO clearance impacts along cable route on benthic receptors. - Potential need for cable protection at the HDD exit pits. - Details of each cable repair rather than as a collective. 	Natural England advises that the EIA and RIAA are updated to consider these impacts.	
	E32	APP-040 5.4 Para 11.2.3 3	<p>Natural England welcome that only the northern part of MLS SAC is being impacted rather than the middle of the SAC. But we do highlight that the sandbank feature extends beyond the site boundary and that impacts from outside the site might have indirect impacts to the SAC.</p>	Natural England advises that all impacts are reviewed, and the EIA and RIAA assessed accordingly.	

Natural England's Key Considerations	Natural England's Advice				
Relevant and Written Representations	NE Ref	Ref	Comment	Recommendation	Risk (RAG)
	E33	APP-040 5.4 Para. 11.2.3 7	Natural England notes that the RIAA does not fully consider the sediment deposition from sandwave levelling to ensure that deposition is in the same sediment type.	Natural England advises that any proposed mitigation is taken through to RIAA.	
	E34	APP-040 5.4 Para. 11.2.5 4	<p>Natural England notes that within the RIAA it is argued that the impacts are small.</p> <p>We direct you to Annex 3 of this Appendix where we provide further advice on small scale losses within the SAC.</p> <p>We also draw your attention to the recent Dudgeon and Sheringham Shoal decision (2024) which required MEEB for less cable protection with the Cromer Shoal Chalk Beds Marine Conservation Zone than is proposed for this project within MLS SAC.</p>	Natural England advises that the Applicant and Natural England agree to disagree on this matter and therefore we provide no further advice into examination unless there are changes to the project design parameters.	
	E35	APP-040 5.4 Para 11.2.6 0	Natural England does not agree with the Applicant's conclusion of No AEoI in relation to MLS SAC which has been designated for Annex I Sandbanks. Natural England consider that any placement of scour prevention/cable protection constitutes a lasting impact over	Natural England do not agree with the Applicants conclusion of No AEoI in relation to MLS SAC which has been designated for Annex I Sandbanks. As previously advised, Natural England consider that any placement of scour prevention/cable protection constitutes a lasting impact over the lifetime of the	

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			the lifetime of the project which is potentially irreversible.	<p>project which is potentially irreversible. Unless it can be demonstrated otherwise, the scale of impacts is likely to hinder the 'maintain' habitat feature conservation objective of the site whilst the protection is in situ, and potentially beyond, due to limitations in the ability to remove the infrastructure.</p> <p>The Secretary of State decision for Hornsea Project Three, Norfolk Boreas, Norfolk Vanguard and DEP and SEP supports this position with a requirement to provide compensation measures.</p>	
	E36	APP-040 5.4 11.2.9 2	Natural England notes that the Applicant has concluded that changes to physical processes within Margate and Long Sands SAC because of the installation of cable protection will be localised, small scale and that 'benchmarks for impacts to the features will not be reached', and as a result have concluded no potential for an AEoI as a result of this pressure. It is not clear what 'benchmarks' the Applicant is referring to here, or what evidence is being used to support the conclusions of insignificant effects. Natural England refers to the Margate and Long Sands SAC Supplementary Advice on Conservation Objectives (SACOs) which	Natural England would welcome any further work the Applicant can do to provide a robust assessment of the potential Worst-Case impact on benthic communities within MLS SAC sandbank feature as a result of changes to physical process from potential parallel lengths of cable protection across all cables.	

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			<p>include targets relating to supporting processes including "Maintain all hydrodynamic and physical conditions such that natural water flow and sediment movement are not significantly altered or prevented from responding to changes in environmental conditions".</p> <p>Natural England considers that any placement of cable protection and associated changes to physical processes and benthic communities could constitute a lasting impact over the lifetime of the project which is potentially irreversible. Natural England therefore disagrees with the Applicants conclusion and consider that an AEoI cannot be ruled out based on the evidence presented.</p>		
<p>Priority Habitats and Species listed under Section 41 list of the Natural Environmental and Rural Communities (NERC) Act, 2006 - Document Used: [APP-074] 6.2.5 Benthic and Intertidal Ecology [APP-102] 6.2.5.4 Main Array and Export Cable Route – Environmental Features Report [APP-119] 6.5.5.1 Main Array – Benthic Ecology Monitoring Report [APP-120] 6.5.5.2 Export Cable Route and Intertidal Benthic Ecology Monitoring [APP-243] 9.13 Margate and Long Sands SAC Benthic Mitigation [APP-265] 9.32 Offshore in Principle Monitoring Plan</p>					
Potential impact pathways where further info/assessment required	E37	APP-102 6.5.2.4 and	Natural England notes that the biotope 'A4.231 Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay' has been identified in both	Natural England advises that the Applicants EIA and subsequent proposed Benthic Mitigation and Offshore In-Principle Monitoring Plan	

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		APP-120 6.5.5.2	the offshore area of the ECC, and in the northern array. This biotope (and peat and clay exposures more generally) is considered likely to be irreplaceable (Defining Irreplaceable Marine Habitats - NECR474 (naturalengland.org.uk)) and is also a priority habitat under Section 41 of the NERC Act 2006.	would benefit from appropriately considering the importance and rarity of peat and clay exposures, and every effort should be made to avoid impact to these priority habitats where possible. This is particularly the case where habitats support rare and/or irreplaceable communities such as boring piddocks.	
	E38	APP-102 6.5.2.4 APP-120 6.5.5.2 APP-119 6.5.5.1	Natural England highlights that the EIA fails to describe how elevation of <i>Sabellaria spinulosa</i> tube structures has been measured in order to inform the 'reefiness' assessment. Photograph 200867_FE4_04_09 within the report appears to show <i>Sabellaria spinulosa</i> structures which are elevated above the seabed potentially in excess of 2cm and covering an area of seabed > 30% and therefore potentially constituting biogenic 'reef' as defined by Gubbay (2007) which would represent a Priority Habitat under Section 41 of the NERC Act 2006.	Natural England would welcome information on the methods used to determine elevation of biogenic structures to determine 'reefiness'. Where there is subjectivity in the process that cannot be sufficiently minimised, we would welcome the application of a precautionary approach, and subsequent reconsideration of the data and evidence to determine the potential for the presence of 'reef' as defined by Gubbay (2007) (and therefore Priority Habitat under Section 41 of the NERC Act 2006).	
	E39	APP-243 9.13	Natural England highlights that priority Habitats as listed under Section 41 of the NERC Act 2006 have not been appropriately considered within the EIA, Benthic Mitigation Plan, or the Offshore In-Principle Monitoring Plan.	Natural England advises that the adoption of mitigation measures via the Applicants Benthic Mitigation Plan, and associated monitoring in the Offshore In-Principle Monitoring Plan are further considered in order that impacts	

Natural England's Key Considerations	Natural England's Advice				
Relevant and Written Representations	NE Ref	Ref	Comment	Recommendation	Risk (RAG)
		APP-265 9.32		(particularly permanent loss), on all Section 41 Habitats are avoided and/or reduced wherever feasible through mitigation measures such as micro-siting.	
Cumulative Impacts Assessment (CIA)	E40	APP-074 6.2.5	Natural England advises that in the event that further Priority Habitats are identified during the examination as a result of the above, assessments will require updating.	Natural England advises that in the event that further Priority Habitats are identified as a result of the above comments, and mitigation cannot avoid those habitats, cumulative impact assessments will require updating.	

Annex E1: Cable protection paper (see [EN010087-001527-DL3 - Natural England - Draft Position Paper.pdf](#) ([planninginspectorate.gov.uk](#)))

Natural England advice on cable protection assessment for offshore windfarms and inclusion in marine licenses

Natural England (NE) has drafted this note in order to provide clarity on how we consider cable protection to be covered in marine licences, and what information needs to be provided in an assessment to support those licences. The advice applies to all marine license applications for cable protection, at various stages of the project lifecycle, not just those considered under the NSIP consenting process. Much of the advice is also applicable to interconnector cables. This is intended to complement the Marine Management Organisation's (MMO) position on scour and cable protection licensing requirements during the Operation and Maintenance (O&M) phase.

Section 1: Application stage

1.1 In the Environmental Statement (ES) for a project there must be a full assessment of the worst-case scenario for cable protection to enable a decision to be made regarding the impacts of a project over the lifetime and in combination with other impacts and activities. In the case of European Marine sites (SACs and SPAs) the assessment must contain sufficient information to allow it to be ascertained (by the process of "appropriate assessment,"¹ and beyond reasonable scientific doubt) whether the project will have an adverse effect on the integrity of the site. If an absence of adverse effect on integrity cannot be demonstrated – see footnote 2.

1.2 It is acknowledged that the worst-case scenario used for lifetime predictions is not the most desirable environmentally and, as more project specifics and environmental data emerge post-consent, the structure of plans and proposals can be amended to allow for the impacts to be reduced. This is in line with the avoid-reduce-mitigate hierarchy, which should be followed in relation to environmental impacts.

1.3 Not everything that is assessed in the Environmental Statement is permitted through the Deemed Marine Licence (DML) for the project, as some aspects require further updating and consultation (i.e. requirement to provide a scour and cable protection installation plan pre-construction, which sets out what is actually permitted). However, provision of the full project lifecycle information in the Environmental

Statement at this stage is required to inform and support the decision making for the project and to provide a level of comfort that the lifetime impacts have been considered.

1.4 Where cable protection is proposed within an SAC or SPA it should be assumed that there will be a likely significant effect due to lasting habitat loss from the cable protection and an “appropriate assessment” would need to demonstrate that there would not be an adverse effect from the proposal. This is likely to be challenging in an SAC designated for its benthic habitats, therefore all alternatives will need to be fully explored. If it is not possible to avoid an adverse effect, then the derogations route under Article 6(4) of the Habitats Directive² could be considered. Similarly, a Marine Conservation Zone (MCZ) assessment would be requirement where cable protection was proposed in an MCZ. For clarity and to fit with subsequent marine licensing requirements, Natural England advise that this information should be presented separately for the following phases with the impacts assessed for each phase and together in total:

- Amount of cable protection to be laid during the construction phase³ of the project.
- Amount of cable protection required for the maintenance of that laid during construction over the lifetime of the project.
- Amount of additional/ new cable protection that may be required to protect assets that become exposed during operation of the windfarm.
- Total amount of cable protection to be left in situ at the time of decommissioning (this may be the total of the above).

1.5 For cable protection to be laid during construction under the DML, an in-principle scour and cable protection plan should be provided as part of the application. This should be updated and resubmitted pre-construction and should reflect up to date information informed by any new survey data, the cable burial risk assessment and additional information in relation to a navigation risk assessment and alternatives. Use of cable protection which leads to lasting habitat loss should be the final consideration after other alternatives have been exhausted and must be minimised as much as possible to reduce environmental impacts.

1.6 Where impacts are within a Marine Protected Area (MPA⁴), the assessment should consider the total amounts of cable protection proposed to be laid across the phases outlined above as an area and percentage of the MPA *feature* to be impacted. The significance of the proposal then needs to be considered against the Conservation Objectives for the site. Natural England's position paper on 'Small Scale Losses' sets out what is required by the Applicant to demonstrate that there are no Adverse Effects on site Integrity (AEoI).

1.7 Natural England will advise that a condition should be applied to all DMLs with wording similar to that outlined below, which will require return of information in relation to the as-built scenario, including the location, volume, area and coordinates of the cable protection laid.

Not more than 4 months following completion of the construction phase of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature

conservation bodies with a report setting out details of the cable protection used for the authorised scheme.

(2) The report must include the following information—

(a) location of the cable protection.

(b) volume and area of cable protection; and

(c) any other information relating to the cable protection as agreed between the MMO and the undertaker.

(3) For any subsequent deployments of cable protection following the completion of construction, the undertaker will provide an updated report as defined in (1) and (2) not more than 4 months following deployment of the cable protection.

Section 2: Construction and maintenance

2.1 The period of construction finishes when developers notify the MMO of the end of construction. However, there will need to be agreement on what is considered the construction period given that this could stretch several years. The cable protection laid during the period of construction is permitted under the DML and restricted to total volumes within the DML, although every effort should be made to minimise these volumes going into construction through the avoid-reduce-mitigate hierarchy.

2.2 As outlined above, the in-principle scour and cable protection plan provided during the application phase should be updated and resubmitted pre-construction and should reflect up to date information informed by any new survey data, the cable burial risk assessment and additional information in relation to a navigation risk assessment and alternatives.

2.3 Natural England considers it is permissible to maintain cable protection that was placed at time of construction for the lifetime of the project through an Operations and Maintenance plan by adding additional cable protection to that which was laid during construction. We support the MMO's position that under an operations and maintenance plan submitted under the DCO maintenance material placement cannot exceed the seabed footprint of the cable protection laid during construction. As per the MMO's advice various timescales and information requirements will apply to these plans. A condition requiring return of information in relation to the as built scenario including the location, volume, area and coordinates of the cable protection laid should be secured as part of these plans.

Section 3: Operational phase

3.1 Natural England considers that any new/additional cable protection to be laid during the operational lifetime of the windfarm is not permitted under the DML and requires a separate marine licence. We acknowledge that there is a desire for longer term licences and support the MMO's position that 10-year licences can be considered for laying of additional cable protected in areas outside MPAs.

3.2 This is not to say that cable protection will not be permitted over the lifetime of the project (out with MPAs); but a separate marine licence process (to that of the DCO/DML) is advised to ensure that proposals can be adequately assessed using up to date information on which to base the assessment (which may be several years after the Environmental Statement data was collected), and enable sufficient transparency of decision making and stakeholder consultation. Data less than 5 years old will be required to support laying of additional cable protection along with descriptions of the seabed habitat and information regarding what cable protection has been laid to date. Justification will need to be made as to why cable protection is necessary considering risk and alternatives and every effort made to minimise amounts required to reduce environmental impact.

3.3 The amount of cable protection proposed in the new licence application should not be more than that assessed overall in the ES and should ideally be reduced to reflect the reduction in parameters from the Rochdale Envelope. Any reduction in design parameter should be reflected in this licence e.g. decreased number of cables installed therefore proportionally less cable protection is permitted to reflect this.

3.4 Should the volumes proposed be greater than that assessed in the ES at the time of consenting then it will be necessary to redo the assessment for cable protection that was undertaken in the ES with up-to-date information and parameters to inform the licence application.

Section 4: Cable protection within MPA during the operational phase of a project

4.1 Natural England considers that replenishment of cable protection/scour prevention over the lifetime of the projects which doesn't increase the footprint of existing protection and is outside of benthic designated sites may be considered on a case-by-case basis as part of the DCO/dML.

4.2 Natural England advises that a precautionary approach is taken to cable protection within MPAs with each campaign of cable protection requiring a new marine licence along with a full assessment. This is for a number of reasons including that our understanding of impacts, the habitat that is there and its condition evolves over time as well as changes in law. Therefore, each time new cable protection is to be laid it will require a new assessment and an Appropriate Assessment or Marine Conservation Zone assessment.

4.3 Where further cable protection is proposed within an SAC or SPA during the operational phase of a project, it should be assumed that there will be a likely significant effect due to lasting habitat loss from the cable protection and an "appropriate assessment" would need to demonstrate that there would not be an adverse effect from the proposal. This is likely to be challenging in an SAC designated for its benthic habitats, therefore all alternatives will need to be fully explored. If it is not possible to avoid an adverse effect, then the derogations route under Article 6(4) of the Habitats Directive (see footnote 2) could be considered. Similarly, a Marine Conservation Zone (MCZ) assessment would be requirement where cable protection was proposed in an MCZ.

Annex E2: Coordinated Approach to Energy Transmission

Natural England has been engaged at a strategic level advising Government and the National Grid through the Offshore Transmission Network Review (OTNR), Holistic Network Design (HND) for Offshore wind, Plan Level Assessments for Offshore Wind lease areas and updates to the Renewable Energy National Policy Statement to further the progression of coordinated approaches to energy transmission in the marine environment. Not only is this likely to reduce the environmental impacts from multiple Green Energy projects in the North Sea seeking grid connection, but it is also likely to help manage grid connection concerns.

However, we note that, as submitted, the Application doesn't seek to progress a coordinated approach with North Falls and/or any of the interconnectors which would help mitigate the impacts from multiple projects. However, given the following extracts taken from various policy and plans we believe that a coordinated approach should be considered as part of the examination.

Section 1: The Renewable Energy NPS:

1.1 Sections 2.8.231 and 2.8.235, intertidal and subtidal, respectively, in the renewable energy NPS states:

'Where cumulative impacts on intertidal/subtidal habitats are predicted as a result of multiple cable routes, applicants for various schemes are encouraged to work together to ensure that the number of cables crossing the subtidal zone is minimised and installation/ decommissioning phases are coordinated to ensure that disturbance is reasonably minimised.'

1.2 The East Anglia Network Study also references the [joint statement](#) from North Falls, Five Estuaries and National Grid, committing to exploring coordinated network designs in East Anglia (July, 2022) which includes the following:

'Onshore and offshore energy infrastructure are critical to delivering on the ambition for the UK to be Net Zero by 2050. As responsible developers, owners and operators of renewable generation and transmission infrastructure, we strongly support the government's ambition to make the UK the world leader in offshore wind. Delivering government ambitions of 50GW of offshore wind by 2030 will create green skilled

jobs, strengthen UK security of supply, provide clean renewable power to fight climate change and help to reduce energy bills for British consumers.

National Grid Electricity Transmission (Sea Link), National Grid Ventures (Nautilus and EuroLink), North Falls (offshore wind farm) and Five Estuaries (offshore wind farm) are working together and exploring the potential for offshore coordination as part of the Offshore Transmission Network Review (OTNR) “Early Opportunities” workstream, with a view to identifying a future Pathfinder Project.

Offshore coordination of these projects could reduce, but not avoid, the need for coastal onshore infrastructure in east Suffolk and southern East Anglia and significant reinforcement of onshore infrastructure, such as the East Anglia Green project, is key to enabling a clean low carbon future irrespective of where energy comes ashore.

Whilst we welcome the progress the OTNR has made and recent publications from BEIS and the energy regulator, Ofgem, on enabling regulatory and policy changes, currently, the detailed commercial, regulatory and legislative frameworks needed to realise offshore coordination are not yet fully in place. We are working with the Government and Ofgem as they continue to progress the changes needed to enable greater coordination between these projects. So as not to impact the Government’s 2030 offshore wind ambition, we continue to progress, in parallel, consent for grid infrastructure projects based on the existing regime.’

1.3 [Ofshore Coordination Support Scheme](#) (OCSS) from Depart of Energy Security and Net Zero, the East Anglia Network Study states:

‘The wind farm developers and NGET are continuing to assess the feasibility of the proposed coordination over the course of 2024. UK Government will then take a view as to whether to continue to fund the exploration of this voluntary coordination. It is important to note that a decision from government to grant OCSS funding does not result in immediate or automatic changes to existing, signed connection agreements between us and offshore wind projects. It is our understanding that all developers in scope of the OCSS are pursuing the exploration of voluntary offshore coordination alongside progressing their existing connection agreements.’

1.4 Conclusions of the East Anglia Network Study:

'This assessment has set out a side-by-side comparison of different electricity network configurations that transfer electricity across or around the region...we expect NGET to consider the assessment findings as part of their ongoing development of the Norwich to Tilbury circuit route. We also shortly expect the UK Government and relevant OCSS developers to decide upon their progression to the next stage of the OCSS.'

Annex E3 - In relation to consideration of small-scale habitat loss within Special Areas of Conservation (SACs) in relation to cable protection Natural England provides the following advice:

1.1. Natural England will usually consider permanent, long-lasting, and irreversible loss to be an adverse effect unless it can be clearly demonstrated otherwise.

1.2. The following points should be considered (but not exclusively) when providing evidence to underpin an assessment of whether an impact is likely to be an adverse effect:

- Location of the predicted loss in terms of whether it sits on a designated or supporting feature of the site.
- Duration of the loss – for loss to be considered temporary it must be clearly time-limited to the point where the impact is predicted to return to the same pre-impact condition and must include a detailed remediation plan using proven techniques as part of the licence.
- Scale of the loss in relation to the feature / sub feature of the site including consideration of the quality and rarity of the affected area.
- Impact on structure, functioning or supporting processes of the habitat.
- Feature condition; and
- Existing habitat loss within the same site/ feature/ sub feature.

1.3 Whilst there are no hard and fast rules or thresholds, in order for Natural England to advise that there is no likelihood of an adverse effect the Applicant would need to demonstrate the following:

- 1) *That the loss is not on the priority habitat/feature/ sub feature/ supporting habitat and/or*
- 2) *That the loss is temporarily and reversible (within guidelines above) and/or*
- 3) *That the scale of loss is so small as to be de minimus alone and/ or*
- 4) *That the scale of loss is inconsequential including other impacts on the site/ feature/ sub feature*

1.4 As set out in (C-294/17 Cooperatie Mobilisation for the Environment UA and Others v College van gedeputeerde staten van Limburg and Others) and other case law relating to People over Wind (2018) for a plan/project to be consented within a designated site there needs to be sufficient certainty in the evidence presented and the recoverability of the features and/or absolute certainty that any proposed mitigation measures will remove an adverse effect on integrity.

1.5 Therefore, we welcome any further work the Applicant can do to provide more certainty in relation to the Worst-Case Scenario presented and/or minimise the impacts as much as possible.