THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

NORTH FALLS OFFSHORE WIND FARM

Appendix B8 to the Natural England Deadline 8 Submission

Natural England's Marine Processes Advice on the Applicant's Deadline 7 Documents

For:

The construction and operation of North Falls Offshore Wind Farm, located approximately 40 km from the East Anglia Coast in the Southern North Sea.

Planning Inspectorate Reference EN010119

23 July 2025

Marine Processes Comments on the Applicant's Deadline 7 Documents

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

- [REP7-042] 9.54 Hydrodynamic and Dispersion Modelling Report (Rev 2) (Tracked)
- [REP7-014] 7.1.2 Report to Inform Appropriate Assessment Part 2 Benthic Ecology (Annex I habitat in SACs and SPA supporting habitat) (Rev 1) (Tracked)
- [REP7-020] 7.3 Marine Conservation Zone Assessment Report (Rev 1) (Tracked)
- [REP7-005[2.6 Schedule of Mitigation (Rev 3) (Tracked)
- [REP7-024] 7.10 Offshore In-Principle Monitoring Plan (Rev 2) (Tracked)
- [REP7-034] 7.26 Site Characterisation Report (Rev 2) (Tracked)
- [REP7-040] 9.53 Cable Specification and Installation Plan (Rev 3) (Tracked)

1. **Detailed comments – Marine Physical Processes**

Table 1: Natural England's Advice On: [REP7-042] 9.54 Hydrodynamic and Dispersion Modelling Report (Rev 2) (Tracked)

Document reviewed: [REP7-042] 9.54 Hydrodynamic and Dispersion Modelling Report (Rev 2) (Tracked)			
NE Ref	**Section**	**Key Concern and/or Update**	**Natural England's Advice to Resolve Issue**
1	7.18.3	We welcome the updated sediment dispersion modelling assessment carried out by the Applicant. This demonstrates that the WCS deposition at MLS SAC due to construction-related (including concurrent) activities is 0.15m thickness over an area of 1.5km^2. This is likely to represent a negligible change to seabed level and seabed morphology.	N/A
2	5.5	The hydrodynamic model results are presented as differences in current speeds and bed shear stress between the Baseline, Option (North Falls OWF), cumulative OWF, and additional cable protection scenarios for different tidal conditions. However, they have not been used to estimate changes in sediment mobility due to the presence of foundations and/or cable protection. Thus. the potential for mobilising different sediment grain sizes has not been evaluated.	Whilst changes in current speeds and bed shear stress due to the presence of foundations and/or cable protection are predicted to be small, they should be evaluated in terms of potential to mobilise different sediment grain sizes. However, based on the Applicant's assessment, we believe that there is nothing more the Applicant can provide to help inform the determination. We, therefore, advise that monitoring should be secured to address the residual concerns.
3	5.5.4 & 5.5.5	The updated hydrodynamic modelling now includes the WCS placement of cable protection offshore of the Essex coast in relatively shallow water. Whilst predicted changes in current speed and bed shear stress due to the WCS cable protection may be relatively small (+/- 5%), the long-term implications to nearshore sediment transport pathways and erosion/accretion potential	Whilst this issue has been progressed, there remains some uncertainty with regards to the implications to nearshore sediment transport pathways and seabed morphology/level due to the presence of the WCS cable protection placement in relatively shallow nearshore waters. We advise that all efforts should therefore be made to minimise the amounts (and height) of external cable protection where it may affect nearshore sediment transport processes, seabed morphology (including offshore sandbanks in shallow water) and seabed level. Consideration should also be given to angle of approach of external cable protection to near shore sediment

		around the cable protection have not been fully considered.	transport pathways to avoid impacts to nearshore sediment transport downstream.
4	Section 7.18	The updated sediment deposition modelling has confirmed that the WCS deposition thickness within KKE MCZ due to concurrent construction-related activities is 0.6 which overlaps the southeast border of the MCZ.	This issue is resolved.
5	Sections 7.6 & 7.7	The updated modelling assessment has been based on the WCS drilling locations for both large and small WTGs near KKE MCZ. In both cases the sediment deposition due to drill arisings is predicted to be <0.5cm and will be contained within the array area near the structures that require drilling i.e. no deposition within the MCZ.	This issue is resolved.

Table 2: Natural England's Advice On: [REP7-014] 7.1.2 Report to Inform Appropriate Assessment Part 2 Benthic Ecology (Annex I habitat in SACs and SPA supporting habitat) (Rev 1) (Tracked)

Document reviewed: [REP7-014] 7.1.2 Report to Inform Appropriate Assessment Part 2 Benthic Ecology (Annex I habitat in SACs and SPA supporting habitat) (Rev 1) (Tracked)			
NE Ref	**Section**	**Key Concern and/or Update**	**Natural England's Advice to Resolve Issue**
1	Section 2.4.3.2.1/para 81	The updated hydrodynamic modelling now includes the WCS cable protection placement adjacent to MLS SAC. The updated modelling demonstrates that there the changes to current speed and bed shear stress due to the presence of cable protection adjacent to the SAC (with a 150m buffer) do not extend beyond the OECC and effects are localised to the OECC i.e. they do not extend to the SAC.	This issue is resolved.

Table 3: Natural England's Advice on: [REP7-020] 7.3 Marine Conservation Zone Assessment Report (Rev 1) (Tracked)

Document reviewed: [REP7-020] 7.3 Marine Conservation Zone Assessment Report (Rev 1) (Tracked)			
NE Ref	**Section**	**Key Concern and/or Update**	**Natural England's Advice to Resolve Issue**
1	8.2.2.4	It is stated that changes in bed shear stress due to the presence of cable protection measures will occur immediately adjacent to the structures and there will be no effect within the KKE MCZ.	This issue is resolved. However, with regards to assessment of seabed mobility and seabed erosion/deposition potential these will need to be reconsidered and assessed prior to construction and inform the cable burial assessment and project design.
2	Tables 5.3 & 5.6	Natural England notes the proposed 50m buffer between array foundations and KKE MCZ. However, we also note that the ES has assessed for scour protection hard substrate out to 75m from WTGs.	Natural England advises that a condition is added that secures that the 50m buffer extends from any hard substrate such as foundations or scour protection.
3	8.2.1.2/8.2.2.4	It is stated that deposition on the KKE MCZ will be of comparable sediment types to those of the MCZ and over a relatively small proportion of the MCZ. It is also predicted that this effect will be temporary as the sediment will naturally be re-distributed by the prevailing waves and tidal currents, and there will be a negligible impact magnitude on the physical attributes and targets of the KKE MCZ features. Furthermore, with regards to operational impacts, it is stated that changes to tidal current speeds and bedload transport would have only negligible effects along the eastern edge of the MCZ and there would be no significant changes to the physical environment (nor the benthic communities).	We advise that owing to the residual uncertainties identified above, and to support the assessment conclusions, substantial monitoring should be carried out to demonstrate that impacts on the physical attributes and targets of the MCZ are negligible.

		However, Natural England continues to have concerns with the assessments and the scale and significance attribute to the impacts.	

Table 4: Natural England's Advice on: [REP7-024] 7.10 Offshore In-Principle Monitoring Plan (Rev 2) (Tracked)

Document reviewed: [REP7-024] 7.10 Offshore In-Principle Monitoring Plan (Rev 2) (Tracked)			
NE Ref	**Section**	**Key Concern and/or Update**	**Natural England's Advice to Resolve Issue**
1	Tables 5-1 & 5-2	In Table 5-2 for Benthic Ecology, construction and operation, it states that in "*the event monitoring discussed in Section 5.3, with regards to sandwave levelling, cable protection or scour within the order limits in proximity to the Margate and Long Sands SAC or Kentish Knock East MCZ, shows significant changes to the physical processes*..." then monitoring of the benthic community will be undertaken. However, the related monitoring proposed in Table 5-1 Marine Geology, Oceanography and Physical Processes, is not aligned.	We advise that the monitoring proposal for indirect effects on MLS SAC and KKE MCZ in Table 5-1 should reflect the monitoring proposed in Table 5-2. Therefore. if monitoring related to sandwave levelling, cable protection or scour within the order limits in proximity to MLS SAC or KKE MCZ shows <u>significant changes to the physical processes and physical environment</u> then monitoring of the benthic community will be undertaken. Furthermore, as discussed in Point 3 of Table 3 above, [REP7-042] there remains some uncertainty regarding the extent and nature of sediment deposition within KKE MCZ, and potential changes to seabed morphology within the area of the MCZ adjacent to the array during operation of the windfarm. Therefore, we advise that the monitoring within this area should be more substantial.