



THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES  
2010

FIVE ESTUARIES OFFSHORE WIND FARM

**Appendix N8 to Natural England's Deadline 8 Submission**  
**Natural England's comments on the Offshore In Principle Monitoring Plan [REP6-029]**

For:

The construction and operation of Five Estuaries Offshore Wind Farm, located approximately 57 km from the Essex Coast in the Southern North Sea.

Planning Inspectorate Reference EN010115

10 March 2025

### **Five Estuaries Deadline 8 Documents – In Principle Monitoring**

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

- [REP6-029] 9.32 Offshore In-Principle Monitoring Plan (Rev C) (Tracked)

## 1.1. Detailed comments

**Table 1: Natural England's Advice On: [9.32] Offshore In-Principle Monitoring Plan (Rev C) (Tracked)**

Document reviewed: [REP6-029] 9.32 Offshore In-Principle Monitoring Plan (Rev C) (Tracked)			
NE Ref	Section	Key Concern and/or Update	Natural England's Advice to Resolve Issue
1	4.3.5 & 4.3.7	Pre-construction survey of the final array areas and a refined cable corridor survey will be undertaken to provide full sea floor coverage swath-bathymetric and side-scan data for area(s) where construction works are to be carried out. However, it is stated that the comparative post-construction survey will be carried out within the agreed array and cable corridor survey areas. It is not clear whether the post-construction survey covers the array areas and cable corridor? This needs to be clarified.	This needs to be clarified.
2	4.3.7	The Applicant has stated that the post-construction survey will be used to substantiate the desk-based assessment and that further surveys may be required if there are significant differences between modelled and recorded scour. We note, however, that triggers for remedial measures (i.e. adaptive management) have not been included, in this event.	We advise that the IPMP should also consider the need for adaptive monitoring if observations of scour are found to be significantly different to that predicted in the ES.
3	4.3.8	Natural England welcomes the Applicant's commitment to survey areas subject to pre-sweeping of sandwaves or other bedforms as part of construction. However, there is no specific mention of Annex I sandbanks or areas of designated seabed. Adaptive monitoring and triggers for the development of countermeasures have not been included either.	We advise that Annex I sandbank and designated areas of seabed subject to sandwave levelling should be surveyed to validate ES predictions of sandwave recovery. The IPMP should also consider the need for adaptive monitoring if unforeseen impacts are detected. Similarly, triggers for the development of countermeasures should be clearly stated.
4	4.6.3 / 4.6.4	Natural England welcomes the additional commitment to analyse DDV footage to determine the presence of Section 41 NERC habitats (including <i>S. spinulosa</i> reef	Natural England welcomes, the additional mitigation commitments, but advise that these should go further to state that where avoidance of Section 41 habitats during

		and peat and clay exposures with piddocks), we also welcome commitments to microsite around these habitats where encountered and where practicable.	construction has not been practicable, then there should be a requirement to demonstrate how impacts have been minimised.
5	4.6.12	Natural England welcomes post construction monitoring commitments to determine any changes in the location, extent and composition of biogenic and/or geogenic reef features which have the potential to be impacted by project infrastructure.	Natural England welcomes post construction monitoring commitments in relation to biogenic and/or geogenic reef features.
6	4.6.13 and 4.6.14	Natural England welcomes the additional commitments to monitor the impacts of cable installation within Margate and Long Sand's SAC, but advise that the monitoring parameters need to consider changes in sediment character in addition to changes in volume of sediment; this is required because sediment character is known to be a key environmental variable in determining the benthic communities present, and will therefore provide an indication of the need for benthic infaunal monitoring.	Natural England welcomes post construction monitoring commitments in relation biogenic and/or geogenic reef features. However, we advise that sediment character (particle size analysis) should be monitored in addition to the proposed monitoring of changes in sediment volume in order to understand likely changes/monitoring requirements for benthic infaunal communities.
7	4.8.7	Natural England notes additional text related to noise measurements of the first four piles as well as the mention of the contingency measures in case noise measurements indicate greater levels of impact than those assessed in the ES. We also note the absence of any additional monitoring for marine mammals.	We advise additional monitoring for marine mammals in addition to the monitoring of underwater noise.
8	4.9.1	The phrase ' <i>....the project maintains the position that there will not be a significant effect on migratory bats....</i> ' is stated without any evidence to back it up. The position of the Five Estuaries windfarm (between South-East England and continental Europe) is likely to be on or near to a number of bat migration routes. In particular, it is on or near to eight of the ten possible Nathusius' pipistrelle migration routes discovered as part of a national project ( <a href="#">National Nathusius' Pipistrelle Project - Explore NBMP Surveys - Bat Conservation Trust</a> ). More generally, the location of Five Estuaries is also likely to be on/near	<p>The Five Estuaries windfarm project does recognise that there is currently a lack of baseline data associated with migratory bats and is considering appropriate monitoring with a view to providing useful and relevant additional data. Notwithstanding the detailed technical advice provided below, Natural England does welcome this commitment from the Applicant.</p> <p>Natural England considers that appropriate onshore and offshore monitoring (at both this site and existing adjacent arrays) should be carried out in the post-consent phase. This should be informed by a comprehensive literature review on</p>

		migration routes of other bats travelling to/from continental Europe. This includes species which may be colonising or recolonising the UK (e.g. greater mouse-eared bat, Geoffroy's bat and parti-coloured bat).	the topic. We highlight that there is now some research which could help with both appropriate survey and an offshore bat mitigation strategy (e.g. Brabant <i>et al.</i> , 2021). Additionally, it is worth exploring whether access can be obtained for relevant bat data held by Motus: <a href="#">Motus Wildlife Tracking System</a> , as this may yield insights regarding risk factors and thereby inform monitoring.
9	4.9.2	Not all potential monitoring options are discussed here.	Despite a number of UK offshore windfarms now being operational, offshore bat monitoring is currently in its infancy, and there is currently no offshore bat survey guidance in the same way as there is for onshore windfarms. However, there is still a need for adequate survey and scientifically appropriate impact assessment. Monitoring bats both offshore and onshore should be considered to improve the evidence base regarding potential interactions and inform mitigation strategies if required. Offshore monitoring techniques for other windfarms have included attaching bat detectors to: floating buoys, boats doing geotechnical surveys, and existing wind turbines. We refer the ExA and the Applicant to the CIEEM webinar ' <i>Bats and the Offshore Marine Environment between Ireland and Wales – Plugging the Empirical Data Gap</i> ', recording available online . Additionally, use of night vision aids should be considered to look at bat behaviour around nearby existing offshore turbines.
10	4.9.1/4.9.2	No mention is made of the three other windfarms that have been/will be constructed in the near vicinity. The potential accumulative impact of four windfarms in close proximity should be considered as part of the monitoring proposals.	The monitoring should be designed in a way to consider the potential impact of the existing/proposed windfarm cluster. Given multiple projects are involved, it would be appropriate for Five Estuaries to seek to develop this through a collaborative approach with the three other developers. This will ensure that any findings, including recommendations around potential mitigation, will be on the basis of a shared approach to the issue.

## References

Brabant, R.; Laurent, Y.; Jonge Poerink, B.; Degraer, S. The Relation between Migratory Activity of *Pipistrellus* Bats at Sea and Weather Conditions Offers Possibilities to Reduce Offshore Wind Farm Effects. *Animals* 2021, *11*, 3457.

