From:	Brown, Emma
To:	Hornsea Project Three
Subject:	EN010080 Hornsea Project 3: Deadline 7 Submission from Natural England
Date:	15 March 2019 00:02:45
Attachments:	EN010080 Hornsea Project Three Deadline 7 - Natural England - ANNEX C - Cable Protection Advice Note.pdf EN010080 Hornsea Project Three Deadline 7 - Natural England - ANNEX D - Note on Small Scale Impact.pdf EN010080 Hornsea Project Three Deadline 7 - Natural England - ANNEX E - Ornithology Response.pdf EN010080 Hornsea Project Three Deadline 7 - Summary of Natural England"s Advice on Cromer Shoal MCZ.pdf EN010080 Hornsea Project Three Deadline 7 - Summary of Natural England"s Advice on Markham"s Triangle pMCZ.pdf EN010080 Hornsea Project Three Deadline 7 - Summary of Natural England"s Advice on North Norfolk Sandbanks and Saturen Reef SAC.pdf EN010080 Hornsea Project Three Deadline 7 Natural England"s comments on the RIES .pdf JNCC Report_598_Revised-2018_WEB - Monitoring guidance for marine benthic habitats.pdf Natural England and JNCC joint Technical Guidance Note - Marine Buffers and Margins - Final.pdf NECR164 Non-breeding season populations of seabirds in UK waters.pdf SNCB response to MSS avoidance rate report_FINAL_251114.pdf EN010080 Hornsea Project Three Deadline 7 - Natural England - ANNEX A - Further Advice on PTA REP5 - 010.pdf EN010080 Hornsea Project Three Deadline 7 - Natural England - ANNEX B - Sabellaria Spinulosa Advice Note.pdf EN010080 Hornsea Project Three Deadline 7 - Natural England - Rule 17 Response.pdf Natural England and JNCC joint Technical Guidance Note - Marine Buffers and Margins - Final.pdf

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Good Evening,

Please find attached Natural England's Deadline 7 Response.

This includes:

- Comments on the RIES
- Rule 17 Response
- ANNEX A: Further Advice on PTA REP 5 – 010
- ANNEX B: Sabellaria Spinulosa Advice Note
- ANNEX C: Cable Protection Advice Note
- ANNEX D: Note on Small Scale Impact
- ANNEX E: Ornithology Response
- Summary of Natural England's Advice on Cromer Shoal MCZ
- Summary of Natural England's Advice on Markham's Triangle pMCZ
- Summary of Natural England's Advice on The Wash and North Norfolk Coast SAC
- Summary of Natural England's Advice on North Norfolk Sandbanks SAC
- Natural England & JNCC joint Technical Guidance Note – Marine Buffers and Margins
- SNCB response to MSS Avoidance Rate Report
- NERC164
- JNCC Report 598

Please note that Natural England has reviewed the MMO's draft Response to the ExA dDCO/DML and are in agreement with their comments. Therefore we will not be providing a separate response on this occasion.

Kind regards,

Emma

THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

HORNSEA PROJECT THREE OFFSHORE WIND FARM

Planning Inspectorate Reference: EN010080

NATURAL ENGLAND

Written Submission for Deadline 7

Summary of Natural England's Advice on The Wash and North Norfolk Coast SAC

14 March 2019

Features of concern		Large Shallow Inlet and Bay, Sandbanks, Reef,	
1.1	Feature condition		A recent condition assessment on 25th January 2019 has identified the listed features relevant to this application and some of their sub features are now in unfavourable condition as a result of fisheries and OWF cable installation. The mechanism that is currently in place to ensure recovery is currently the identification and implementation of fisheries byelaw areas and natural processes for OWFs.
2.1	Survey Data	Project specific incl. Survey effort	NE considered that the post application submission survey effort was sufficient to provide a basic consent characterisation of the development area, and that this level of information with support desk based evidence remains suitable at an EIA scale. Please see Annex D1 [REP1 – 210] and Annex D7 [REP – 217] However, Natural England highlights that the levels of information/evidence/data required to understand the potential scale of the impacts of a proposal on designated site features often go beyond those that would be required to characterise the development area. Especially where an Adverse Effect on Integrity can't be ruled out and/or consideration is required in relation to the suitability of any proposed mitigation measures to minimise the impacts to an acceptable level. This is particularly true for this site where the survey data doesn't allow for the extent of the features to be determine due to the lack of Geophysical data and also limited near shore survey data. Often, the tools and techniques required to undertake a development activity, such as cable installation, can vary significantly depending on the ground conditions, and consequently the impacts arising from the installation can also vary. In some cases, the requirements in a particular location may be easily determined from a fairly basic level of site characterisation. For example, where exposed bedrock is identified it may be relatively easy to confirm the techniques required for installation and to consider the impacts on that feature. However, in a sediment habitat, the techniques required may depend not only on the surface substrate/biotope, but also on the underlying geology, and therefore further investigative work may be required in order to establish the likely installation method before the impacts could be considered and/or mitigated. We note that no geotechnical survey data for the near shore area of the Wash and North Norfolk Coast SAC was not included in the Potential Trenching Assessment [REP5 – 010] document. Therefore this adds decreased certainty.

			It would have been beneficial if a more complete PEIr had been provided during the pre-application phase and during this phase sufficient time was allowed for issues and potential evidence gaps to be addressed. However, the lack of additional evidence to reduce the uncertainty in relation to scale of the impacts and possible mitigation measures is unlikely to resolved within the examination phase and remains an outstanding concern. The significance of which means we are unable to advise that an adverse effect on integrity can be ruled out.
2.2		SNCB site management	As part of management of designated sites, the SNCBs will periodically commission designated site surveys. However, due to the size of the marine sites it is unlikely that the whole site will be surveyed at any one time. These surveys are broad scale mapping surveys to inform site management measures and therefore are not of sufficient resolution and/or scale to be used to determine impacts to designated features from sustainable development. As noted at ISH 2 EIFCA has data for the near shore area adjacent to the proposed cable corridor which has identified possible cobble reef which is a more stable habitat that the Applicant has set out in it RIAA. This area is under consideration for a revised fisheries byelaw area.
2.3		Desked based Study	It is prudent to use all available data sets to support project specific data and/or fil any evidence gaps. However, as set out In Annex DI and Annex D7 [REP- 201 and REP217] it is not appropriate to rely on point surveys 10s KM from the cable corridor and outwith the designated site. Therefore there remains considerable uncertainty in the interest features present; the under lying geology and the implications this may have on cable burial; the need for remediation works and what they may be; and the scale of any further impacts to the designated site features.
3.1	Characterisation	Biotopes	Again Natural England highlights the importance of the use of a 'common currency' approach to facilitate in combination and cumulative assessments, not just for this project, but for future plans and projects that may need to take account of Hornsea 3 in their assessments.
3.2		Site Features	Whilst the applicant has extrapolated from project specific data in the MCZ, we believe from the drop down video survey that it is not just Annex I sandbanks along the Hornsea Project three cable route. The more consolidated sediments and epifauna within the video stills could be representative of Reef features Annex D1 [REP – 210]

4.1	Consideration of impacts to site features and significance	Site Preparation work (none sandwave levelling)	In the Applicants RIAA [APP - 051] Benthic impacts from the cable route prep. were not included such as grapnel run, UXO clearance, boulder clearance and sandwave clearance. Therefore further consideration should be given to the cumulative impacts to the site features.
4.2		Sandwave levelling	Location of impact: Natural England advises that the proposed sandwave levelling within W&NNC SAC is levelling/changing of Annex I habitats i.e. mobile part of Annex I sandbanks and wholly within designated feature. Recovery: Sandwave clearance activities have only been proposed and undertaken relatively recently and consequently there is limited evidence on how well this approach works, whether cables remain buried thus avoiding the need for additional cable protection, and very limited evidence on how quickly dredged areas recover. The applicant has provided additional information in REP-020 outlining their experience at one of their other projects, Race Bank Offshore Windfarm. As set out in Natural England Deadline 1 Annex D3 response [REP – 215] This report provides some evidence to support the potential for recovery of affected features after sandwave levelling has occurred. However, at this stage there is not sufficient information available to determine if full recovery to pre impact condition can be achieved or to determine a potential timescale for recovery, and it is also unclear if the findings at Race Bank (nearshore project) would be relatable to all sandwave/sandbank features, including the much larger examples found further offshore. The main factors that are considered to influence the recovery potential (i.e. the mechanism and speed of recovery) of the levelled sandwaves are: • The dimensions of the dredged area, particularly the width and depth of the dredged channel relative to the overall sandwave height, and the alignment of the dredged channel relative to the crest axis; and

			• The degree of sediment mobility at the dredge location, which is in turn controlled by the environmental forcing conditions and water depth. In addition no consideration has been given to potential remediation plan using proven techniques Scale of Impacts: The scale of the proposed sandwave levelling is not considered as de minimus even if the sediment can be retained within the system (see Mitigation below). The project is likely to impact on the variables that help define the extent and distribution of a sandbank, namely sediment composition and biological assemblages.
4.3		Deposition of sediment	As yet the deposal location/s has/have not been agreed. Therefore there is no guarantee that the sediment will remain within the system. A loss of Annex I sediment is considered to be Likely Significant effect, The quantities proposed in the Application is not considered to be deminimis and/or in consequential. Therefore we advise that an adverse effect on integrity can't be excluded. It should be noted that there is a difference in the particle size of the Annex I sandbank sub features. Therefore there is the potential for a significant difference in particle size between the removal and disposal locations resulting in a change in the extent of Annex I habitats; the temporal scale of which is unknown for sandwave levelling and within this site. Without further restrictions on disposal locations there is also the potential for Annex I reef to be significantly impacted. We would therefore advise that there are disposal conditions included within the DML: identify the disposal locations; the locations ensure that sediment remains within the Annex I sandbanks system; the particle size as the disposal locations is 95% similar that of the removal location and Annex I reef and areas being managed as such (Plus buffer) are avoided All Areas of Annex I Reef and areas managed as reef should be excluded for direct disposition and mechanisms should be put in place to ensure indirect impacts through

			sedimentation is limited to an acceptable level; including those areas to be managed as reef.
4.4		Cable Protection	Natural England's advice remains unchanged from our Deadline 1 Written Reps. Having considered the RIAA, and further documents submitted by the applicant during examination including the measures proposed to mitigate for any adverse effects, it is the advice of Natural England that it is not possible to ascertain that the proposal will not result in adverse effects on the integrity of the site in question either alone or in-combination. Further assessment and consideration of mitigation options are required, and Natural England provides the following advice on the additional assessment work required; NE remains concerned that evidence presented by the applicant does not sufficiently show that there will be no permanent, long-lasting and adverse loss of SAC habitat as a result of the proposed cable protection; in coming to this view we advise the following; - The predicted impacts will directly affect the SAC feature. - We are not satisfied that the likely impacts can be considered to be of a temporary nature. Natural England remains concerned about the decommissioning of rock protection that is proposed to make good any impact. We do not believe that this has been satisfactorily addressed by Annex 2 JdN 'Technical note for decommissioning Race Bank Export Cable rock protection' we have the following comments: See Deadline 7 Cable protection Annex - The predicted Impacts are only considered by Applicant to be significant if impacting on existing Annex I Sabellaria spinulosa reef (priority habitat). And therefore that impact of that feature is small. However, this feature is in unfavourable condition due to anthropogenic activities. The placement of rock armour within the area for the management of reef would in our view hinder the restoration of this feature. We consider that the establishment of Sabellaria spinulosa on artificial substrate does not form part of the SAC feature and is not ""counting"" towards its conservation objectives, in so much as if reef grows back over rock armouring then it's still

			unfavourable condition, as it is not the biotope set out in conservation advice i.e. it is not a replacement for Sabellaria spinulosa reef on natural site sediment habitat.
4.5		Phased Build	Natural England notes that in [REP - 178] the applicant has not an anticipated that recovery will happen between both the different construction stages and the phased builds. Therefore any Appropriate Assessment would need to take into account both the spatial and temporal impact to the interest feature/s of the site. As there could 13 years of impact before the site would start to recover and up to 18 before full recovery could occur unless cable protection was used when we believe there would be a permanent habitat change. Therefore we can confirm that we do not believe the cumulative impact is flawed, it is more a recognition of the temporal scale of the impacts
4.6		Operation and Maintenance	See Natural England advice on cable protection Deadline 7 Annex
5.1	Mitigation		Annex I sandbanks: Whilst at Para 11. of Annex D4 [REP1- 217] we suggested some mitigation that has been used for other industries. The only mitigation that has been presented to reduce the impacts has been one of potential removal at the time of decommissioning. As set in our response to Deadline 6 the Cable Installation Plan and the conditions with that including the use of an ECOW may ensure the real time compliance with the requirements of the DML condition documents, but it doesn't address the current LSE sufficiently to exclude an adverse effect on integrity and meet the requirements of the habitats directives i.e. the presence/use of a ECOW s not mitigation. Annex I reef: Micrositing around reef where possible. When undertaking Pre construction Annex I reef surveys in an area with the same side scan sonar a ‘reef’ return is identified and the extent of that habitat is mapped. That potential reef area is then ground truthed using grab samples and drop down video to determine the reefiness qualities i.e. elevation, abundance and patchiness.

			The micro siting condition is to avoid areas of reef no matter what the quality. Therefore the suggestion to avoid reef where possible is outside the proposed mitigation. In addition to this if cable protection is installed then there will be a permanent change to the habitat and therefore we believe that there will be a loss of feature extent and the management measures for the site would be hindered. Accordingly consideration of the most appropriate installation technique/tool would is required
6.1	Recovery		We note the Applicant's conclusion of "high confidence that the seabed will recover to a new natural equilibrium state within a timescale of months to years." We would suggest that approaching a new equilibrium may not be in accord with restoration of the site, if that new equilibrium is out with the sediment composition or biological communities expected from the designated feature. Natural England agrees The applicant has cited that Sabellaria spinulosa reef can establish on rock amour and therefore the Annex I habitat can recover. However, it is the SNCB advice that the establishment of Sabellaria spinulosa on artificial substrate doesn't "count" towards favourable condition, in so much as if reef grows back over rock armouring then it's still unfavourable condition, as it is not the biotope set out in conservation advice i.e. it is not a replacement for Sabellaria spinulosa reef on natural site sediment habitat.
7.1	Restoration		No consideration has been given to any remediation plan using proven techniques for any Annex I habitat. Natural England doesn't believe that there is any remediation and/or restoration that can be undertaken to restore Reef feature to any pre impact state.