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HORNSEA THREE OFFSHORE WIND FARM

Planning Inspectorate Reference: EN010080

**HORNSEA THREE OFFSHORE WIND FARM ORDER 2020 (AS  
AMENDED) (“the Order”) SUBMISSION OF SANDBANKS  
IMPLEMENTATION PLANS UNDER PART 2 OF SCHEDULE 14 TO  
THE ORDER**

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**Appendix 1: Assessment of SBIP against best practice guidance  
for developing compensatory measures in relation to Marine  
Protected Areas**

21 January 2022

Our Ref: 376659

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## Introduction

This Appendix provides Natural England and JNCC's detailed formal Statutory Nature Conservation Body (SNCB) advice on the Hornsea Project Three's proposals submitted on 1<sup>st</sup> December 2021 to discharge the compensatory requirements in the Hornsea Project Three decision letter (and associated documents) dated 31st December 2020

In providing our advice we have reviewed the following documents:

- NNSR SAC SBIP (Version 3.0, dated 01/12/21)
- WNNC SAC SBIP (Version 3.0, dated 01/12/21)
- Appendix 1 Marine Debris Removal Campaign Desktop Study (Version 3.0, dated 01/12/21)
- Appendix 2 Environmental Monitoring Plan for Impacts Associated with Cable Protection (Version 3.0, dated 1/12/21)
- Appendix 3 Indicative Disposal Location Study Sandwave Levelling and Seabed Preparation (Version 3.0, dated 1/12/21)
- Compensation Consultation Summary (Version 3.0 dated 1/12/21)

## Background

Natural England has previously provided comments on the proposed compensation measures as part of the Examination process and in our [response to SoS Consultation](#) (April, 2020), and have engaged in detail with the Benthic Steering Group put in place by Hornsea Project Three. As part of that engagement, we have provided detailed verbal and written feedback to the applicant on iterations of the draft Sand Bank Implementation Plans (SBIP).

In providing our advice on the final SBIP to the Secretary of State, Natural England and JNCC have focused our advice on assessing the ecological merits of the SBIP compensation measures and how the proposals accord with the draft principles in DEFRA's [REDACTED]

[REDACTED]

[REDACTED].

## **DEFRA's draft Principles of Compensatory Measures**

DEFRA's draft guidance provides a set of over-arching Principles to guide Applicants and decision-makers. These state that compensatory measures should:

- a. Link to the conservation objectives for the site or feature and address the specific damage caused by the permitted activity;
- b. Focus on providing the same ecological function for the species or habitat that the activity is damaging OR, where this is not technically possible, provide functions and properties that are comparable to those that originally justified designation;
- c. Not negatively impact on any other sites or features;
- d. Ensure the overall coherence of designated sites and the integrity of the MPA network; and
- e. Be able to be monitored to demonstrate that they have delivered effective and sustainable compensation for the impact of the project. The monitoring and management strategy must require further action to be taken if the compensation is not successful.

### **a. Link to the conservation objectives for the site or feature and address the specific damage caused by the permitted activity**

The conservation advice packages for the North Norfolk Sandbanks and Saturn Reef (NNSSR) SAC and The Wash and North Norfolk Coast (WNNC) SAC do not include marine litter as an activity of concern for the sites. The presence of marine litter is therefore not a factor in terms of the conservation objectives for WNNC or NNSSR SAC. As such, our main concern is that any litter removal or an awareness campaign will not make a positive difference to the conservation objectives of the sites and therefore cannot be considered to offer successful compensation measures.

#### *j) Overarching conservation objectives and favourable condition status*

The conservation objectives for NNSSR and WNNC SAC are included in

Table 1. The Annex I Sandbank and Reef features of both the NNSSR and WNNC SAC are largely in Unfavourable Condition, see Table 2, and the [REDACTED] [REDACTED] [REDACTED] [REDACTED] for NNSSR SAC considers that activities should be managed by reducing or removing associated pressure from cabling.

In relation to NNSSR SAC Natural England and JNCC are of the view that cable laying with associated protection is incompatible with the achievement of the conservation objectives advised for the SAC and would impede restoration of the Annex I feature 'sandbanks which are slightly covered by seawater all the time'.

In relation to the WNNC SAC, as some of the features (and sub features) of this SAC are considered to be in unfavourable condition, adding further pressure to the SAC with cable laying and associated cable protection is likely significantly impact the conservation objectives of the SAC and may impede restoration of the features ██████████

*Table 1 conservation objectives*

North Norfolk Sandbanks and Saturn Reef SAC	<p>For the features to be in favourable condition thus ensuring site integrity in the long term and contribution to Favourable Conservation Status of Annex I Sandbanks which are slightly covered by sea water all of the time and Annex I Reefs. This contribution would be achieved by maintaining or restoring, subject to natural change:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the qualifying habitats in the site;</li> <li>• The structure and function of the qualifying habitats in the site; and</li> <li>• The supporting processes on which the qualifying habitats rely</li> </ul>
The Wash and North Norfolk Coast SAC	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats and habitats of qualifying species</li> <li>• The structure and function (including typical species) of qualifying natural habitats</li> <li>• The structure and function of the habitats of qualifying species</li> <li>• The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely</li> <li>• The populations of qualifying species, and,</li> <li>• The distribution of qualifying species within the site.</li> </ul>

*Table 2 Feature Condition*

Site	Protected feature	View of condition
North Norfolk Sandbanks and Saturn Reef SAC	Sandbanks which are slightly covered by seawater all the time	Unfavourable
North Norfolk Sandbanks and Saturn Reef SAC	Reefs	Unfavourable
The Wash and North Norfolk Coast SAC	Sandbanks which are slightly covered by sea water all the time	Favourable 72% Unfavourable recovering 28%
The Wash and North Norfolk Coast SAC	Reefs	Favourable 1%, Unfavourable recovering 37%, Unfavourable no change 61%.

**Given these objectives, the condition of the SACs and the drivers for that condition, JNCC and Natural England do not feel that the SBIPs as proposed adequately links to the conservation objectives for the sites.**

ii) *Maintaining the extent and distribution of qualifying habitats*

████████████████████ states that “*compensation ratios of 1:1 or below should only be considered when it is demonstrated that with such an extent, the measures will be 100% effective in reinstating structure and functionality within a short period of time*”. The high degree of uncertainty associated with the effectiveness of the proposed compensation measures therefore cast significant doubt over the suitability of adopting a 1:1 ratio.

The DCO maximum design envelope allows for 6% of the length of cables falling within any European site to be subject to cable protection (Deemed Marine Licence Part 2 Conditions 3 (3)). The worst-case scenario (WCS) area of impact to Annex I habitats from the Hornsea Three OWF as set out in the SoS Decision (31 December 2020) will be a long term/permanent loss of 41.80 ha in NNSSR SAC and 2.77 ha in WNNC SAC. The DCO requirement is to carry out a debris removal within an Area of Search equating to a minimum of 41.80 ha for NNSSR SAC and 2.77 ha in WNNC SAC. On assessing the SBIPs we note there are no guarantees on the number of pieces of debris that will be located, or the numbers of >1 m sized debris which will be successfully retrieved from the Areas of Search as part of this one-off campaign. Therefore, the SNCBs remain concerned that should no/limited targets be located and/or debris removed, the DCO requirement for compensation will be considered fulfilled, despite not addressing the long-term/permanent loss of Annex I Sandbanks. The area impacted by marine debris removal may therefore be considerably less than the spatial scale of damage from cable protection as assessed during examination and predetermination.

We note that Hornsea Project Three predict that within the proposed 6-week marine debris removal campaign period proposed approximately 168 targets may be removed from one of the SACs. Assuming an average size of 5 m<sup>2</sup> per target, then the campaign might remove debris covering an area of approx. 4,200 m<sup>2</sup> (i.e., less than half a hectare). Whilst we note that the survey period may be extended, this area is considerably less than the worst-case scenario (WCS) area of impact of 41.80 ha in NNSSR SAC and 2.77 ha in WNNC SAC. ██████████

████████████████████ states that “*compensation ratios of 1:1 or below should only be considered when it is demonstrated that with such an extent, the measures will be 100% effective in reinstating structure and functionality within a short period of time*”. We do not believe that sufficient evidence has been provided to suggest this is the case.

### iii) NNSSR SAC

JNCC are particularly concerned that searching this area within NNSSR SAC may result in a limited amount of debris being removed. Fig 1 represents JNCC's understanding of the marine debris known within NNSSR SAC. This has been created from Oil and Gas Authorities subsurface infrastructure layer, Cefas's North East Atlantic Seafloor Marine Litter Data layer (where the litter is noted as being a fishing line, synthetic rope or metallic deposits) and OSPAR's IA2017 seabed litter layer showing relative number of litter items per square km.

JNCC highlights the following:

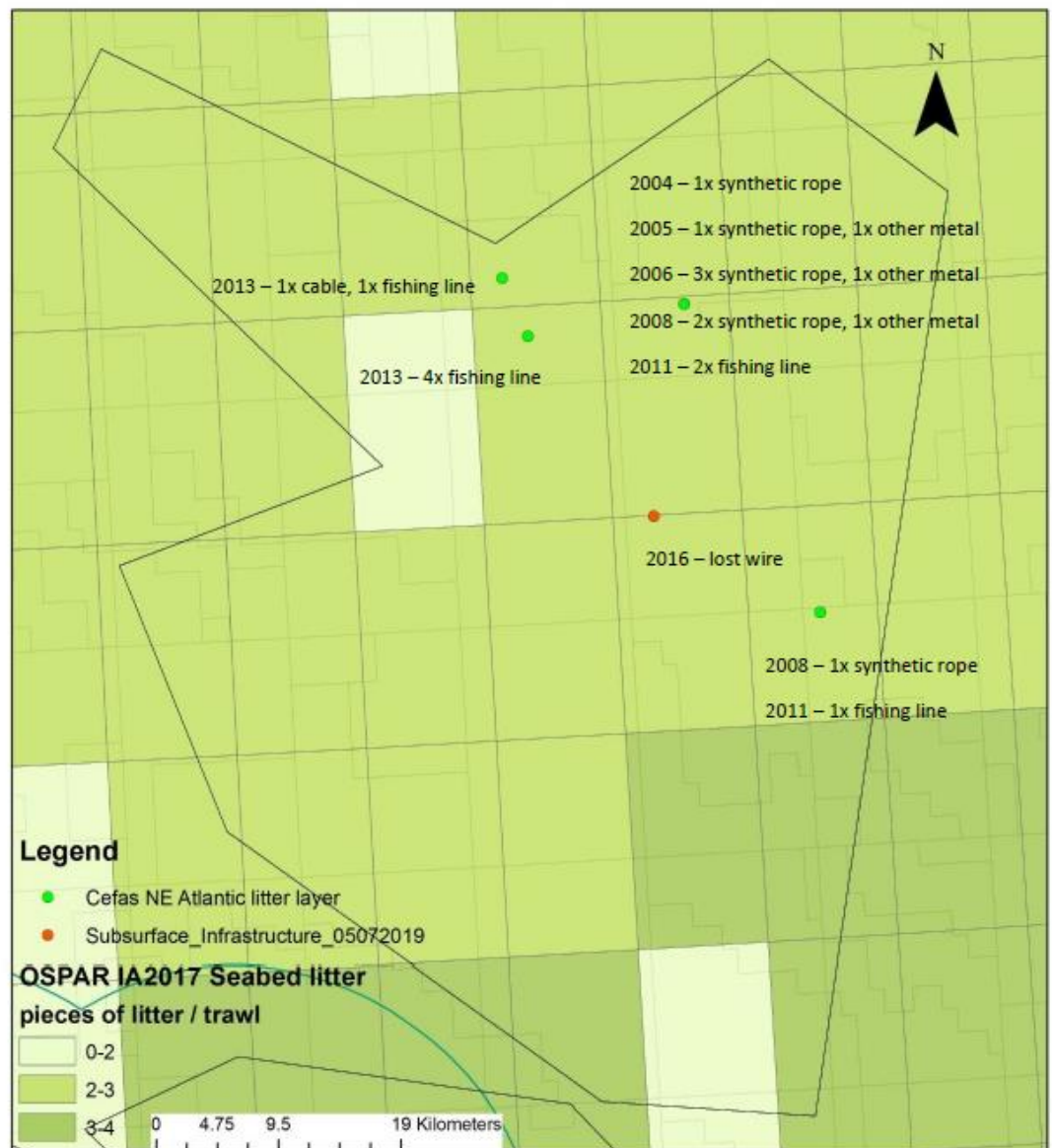
- The majority of the litter is noted in Cefas's dataset. However, the latest of these points is 2013, and many are from 2008 – 2011. Given that the majority were noted as synthetic rope or fishing line, these pieces of debris may no longer be present, unless potentially tangled round infrastructure or buried.
- The pieces of litter / debris noted are outwith the topological sandbanks in the site.
- The pieces of litter / debris do not correspond to areas which JNCC believes indicate higher efforts of fishing in the site which doesn't link to the requirement to remove ghost fishing gear.

OSPAR undertook a litter survey as part of the Intermediate Assessment in 2017. This comprised distribution and abundance of marine litter on the seafloor in the OSPAR Maritime Area investigated on the basis of data collected by trawl surveys from seven Contracting Parties. This shows a slight gradient of litter collected over the site, with higher amounts of litter being collected to the south of the site (3-4 pieces of litter per trawl, compared to 0-3 pieces of litter per trawl over the rest of the site). We also note that this area of the site is heavily used by the oil and gas industry, and many 500 m safety zones are present in that area.

JNCC understand that there are linkages between physical conditions, sediment transport and areas of accumulation / burial / exposure of marine debris. However, we advise that based on our current knowledge, there is little litter or debris in the site that would be subject to transport or burial, and that we would not expect objects of a size greater than coarse sediment to be routinely transported in the site. Furthermore, we highlight that if areas of accumulation correspond to troughs between ripples, sandwaves or sandbanks, they may also correspond to areas of less represented biotopes or habitats, such as circalittoral mixed sediments, coarse sediments or Sabellaria reef. As such, operations that impact the seabed in these areas may prove challenging and will need to be fully considered and assessed by the MMO when the marine removal licence is applied for by the Hornsea Project Three. As part of that marine licence application, in-combination impacts with other plans and projects including the Hornsea Project Three DCO/dML will need to be undertaken.

Therefore, we do not believe that enough debris could be collected to make any discernible improvements to restoring Annex I sandbanks in NNSSR SAC, or to offsetting the long term/permanent sandbank habitat loss from the placement of cable protection.

Fig 1: JNCC map of NNSSR showing known debris





iv) Marine Awareness Campaign

It is also not clear to SNCBs how the marine awareness campaign relates to the achievement of the conservation objectives of the site. While uptake of transponders / use of rapid retrieval methodologies can be measured as a success factor for the campaign, transposing that to success factors that show reduced impacts to the site features is considerably more challenging. We would be keen to understand how Hornsea Project Three intend to do this. The same can be said for any success factors measured through an increase in stakeholder understanding in relation to the impacts of marine debris, or stakeholder behaviour change. We are also unsure how quantitative uptake of the measures could be used to infer the amount of debris that would have otherwise been discarded into the marine environment, and how that has offset long term/permanent habitat loss.

**Natural England and JNCC advise that the SBIPs do not meet the 1:1 compensation ratio set out in Defra and EC guidance, and do not consider that it has been successfully demonstrated that the measures proposed within the SBIP will maintain the extent and distribution Annex I Sandbank feature.**

***b. Focus on providing the same ecological function for the species or habitat that the activity is damaging OR, where this is not technically possible, provide functions and properties that are comparable to those that originally justified designation***

Natural England and JNCC acknowledge the wider environmental benefits that the removal of marine litter could provide, in particular in terms of requirements under the Marine Strategy Framework Directive and Marine Plans. However, there is little evidence of the impact of litter on the structure and function of sandbank features and therefore this has not been assessed or quantified as part of the conservation objectives of these designated site features. Consequently, it is unclear if/how removal of marine litter would compensate for the impacts of habitat loss of Annex I sandbanks as a result of the proposed development, meaning that the overall coherence of the national site network would not be maintained.

We consider the compensation as proposed to be more akin to Biodiversity Net Gain, or as part of wider nature recovery initiatives, rather than effective compensation.

Natural England also advises that the Area of Search within the SBIP targets coarse and mixed substrate which is a sub feature of sandbanks in the WNNC SAC. However, for both WNNC and NNSSR SAC the biological communities in these habitats are likely to be different to those in the sandier sediments associated with sandbanks. In addition, any mixed and coarse sediment may be functionally linked to either biogenic and geogenic Annex I reef

features rather than sandbanks. **Therefore, it is not clear to Natural England how the removal of debris from mixed and/or coarse sediment will help with the functionality of adversely effected Annex I Sandbanks.**

### **c. Not negatively impact on any other sites or features**

Natural England and JNCC have worked constructively with Hornsea Project Three as part of the Benthic Steering Group to address potential negative impacts from the removal of marine debris. We welcome that positive changes have been made to the SBIP proposals in response to SNCB concerns. However, we remain concerned that there is potential for there to be unintended impact pathways to the designated features of the WNNC and NNSSR SACs, as outlined below:

- There is currently insufficient information included within the decision tree for SNCBs to have certainty that the onboard ecologist would have sufficient guidance to ensure marine debris removal would not damage other site features such as Annex I Sabellaria Reef and Geogenic Stony reef. We have suggested to the Applicant that habitat classification, cut-off criteria, and buffer zones are included within the decision tree which we understand will be submitted as part of the Marine Licence Application for debris removal
- The SNCBs have concerns that the retrieval of fishing gear by fishers as a result of the rapid retrieval mechanisms (Net Tag responders) holds the potential for further damage to the protected features of WNNC and NNSSR SACs, depending on the method of retrieval.
- As The Wash has been an active bombing range and surrounded by RAF bases since the war there is a high probability that UXO will be identified. Whilst it is stated that UXO will be not removed by Hornsea Three but reported to HM Coastguard as part of the debris removal campaign, there is the potential that identified UXO may ultimately need to be removed or managed as an emergency health and safety matter, and there may be unintended damage on Annex I features from undertaking the search. This was the case during the Race Bank cable installation.

**d. Ensure the overall coherence of designated sites and the integrity of the MPA network;**

*'An ecologically coherent network consists of sites designated for the protection of relevant habitats and/or species. It should support habitats and populations of species in favourable conservation status across the whole of their natural range; and contribute significantly to the biological diversity of the biogeographic region'* [REDACTED]

The AEoI caused by the permanent loss of 41.80 ha in NNSSR SAC and 2.77 ha in WNNC SAC of Annex I Sandbank habitat from the placement of OWF cable protection may have an impact on the overall coherence of these sites, which are already in unfavourable condition due to pressures from anthropogenic activities, including cabling.

Natural England consider that the proposed SBIP and marine debris removal campaign will not support the Annex I Sandbank feature in reaching favourable conservation status.

In addition, the SNCBs foresee that should no/limited targets be located and/or debris removed, the DCO requirement for compensation will technically have been fulfilled, despite not addressing the long-term permanent loss of Annex I Sandbanks (particularly in the context of the limited relevance of the measures). The area impacted by marine debris removal may therefore be considerably less than the spatial scale of damage from cable protection as assessed during examination and pre-determination, further diminishing its effectiveness.

We note that within the recent Norfolk Boreas Offshore Wind Farm Development consent decision (10<sup>th</sup> December 2021) the SoS concluded that they could not rule out AEoI on Annex I Reef and Sandbank Features of Haisborough, Hammond and Winterton (HHW) SAC due to the permanent loss of 8.3 ha of benthic habitat due to cable protection within MPAs and recommended a similar marine debris removal campaign and SBIP. The Boreas decision however requires that the equivalent area of marine debris must be removed before offshore works can commence, and that should insufficient debris be located within HHW SAC then wider removal with the MPA network within similar habitat types must be completed, allowing for a degree of adaptive management. Whilst Natural England advised that these measures would also not provide appropriate compensation, we observe that additional requirements have been placed on the Norfolk Boreas consent compared to those of Hornsea Project Three. We would therefore welcome BEIS giving further consideration to the need for adaptive management measures within the SBIPs, though we consider these should be focused on alternative/additional compensation measures rather than amending those already included as part of the SBIP.

In relation to the coherence of the MPA network, we noted that [REDACTED], laid out Government's ambition to quadruple Offshore Wind capacity by 2030. If it has not been proven beyond reasonable scientific doubt that compensation within

the SBIP for current and future Offshore Wind Farms will offset the AEoI to benthic habitats, and in the absence of alternative compensatory measures for benthic impacts, the SNCBs are concerned there is the potential for exponentially increasing habitat loss from cable protection should marine debris removal be found not to offer inadequate compensation. This would not only impact the integrity of the designated sites affected, but also the coherence of the national site network.

**e. Be able to be monitored to demonstrate that they have delivered effective and sustainable compensation for the impact of the project. The monitoring and management strategy must require further action to be taken if the compensation is not successful.**

Natural England and JNCC have provided detailed advice to the applicant on monitoring requirements in our previous advice to the Benthic Steering Group, unfortunately many of the points raised remain outstanding and we continue to have concerns regarding the adequacy of the monitoring specification.

Natural England note that monitoring is proposed on up to 5 areas where individual pieces of debris larger than 10 m have been successfully retrieved within each SAC, , as a one-off event, one year post removal, if those areas can be relocated.

Natural England and JNCC advise that monitoring is required to understand the impact of cable protection, and how its deployment may impact on the achievement of the conservation objectives of the site. We note that the only monitoring in the context of the conservation objectives of the designated site(s) comes in the form of using changes in epibenthic assemblages to determine changes in functionality of sandbanks in the vicinity of the cable protection. The SNCBs are of the opinion that, in the context of conservation objectives, the monitoring proposed is unsatisfactory as it doesn't survey infauna. Please see detailed comments in Appendix 2.

The SBIP monitoring plans currently only discuss rock protection and does not consider other forms of protection which could foreseeably be used including, but not limited to, concrete mattresses, rock berm, grout bags, rock bags and fronded concrete mattresses. Natural England suggest that monitoring should assess the impacts of all anthropogenic hard substrate used in the MPAs for external cable protection.

Regarding the debris removal, Natural England would welcome a proportion of locations being revisited to demonstrate that recovery has occurred and is rapid, as this currently remains an evidence gap and may help with wider discussions about removal of infrastructure and

recovery. It would be useful to monitor recovery/infill of holes and scour left by debris both before and after removal to provide evidence regarding whether the removal of it is contributing to recovery of the feature.

We note that the Environmental Monitoring Plan ('EMP') survey methodology (section 4) for cable protection pre-construction, during operation and post decommissioning refers solely to geophysical surveys and Drop Down Video (DDV) As such, we understand that Hornsea Project Three mean to survey epifauna only (with no infaunal analysis). Natural England and JNCC would like to reiterate that we do not consider reviewing the nature of epifaunal assemblage change to be an appropriate part of monitoring, given that in many sandbank habitats, mobile and sessile epifauna may be sparse and not major parts of characteristic communities<sup>1</sup> and will be inadequate to determine change.

Natural England note that MMO and SNCBs will be consulted on the monitoring reports, but question why BEIS have not been afforded this opportunity, as the competent authority that has mandated the compensation. Neither has the wider Benthic Steering Group. Natural England and JNCC are concerned that an EMP focussing on compensatory measures is very distinct from a standard EMP. Therefore, we question how any outputs will be openly and transparently consulted upon, when the dML condition referred to only relates to the MMO in consultation with the relevant SNCB. We believe that there is a wider requirement for BEIS and other stakeholders to be made aware of the outcomes, not only so that evidence gaps can be filled, but so that lessons can be learnt (even if this is only to modify/standardise monitoring methodologies).

**In summary, we do not believe that the monitoring proposed will be able to demonstrate the effective compensation of long-term/permanent loss of Annex I Sandbanks covered by seawater all the time. We are also unsure how quantitative uptake of the measures could be used to infer the amount of debris that would have otherwise been discarded into the marine environment, and how that has offset long term/permanent habitat loss.**

## **Conclusions**

Having reviewed the Hornsea Project Three SBIP against the Principles in DEFRA's draft best practice guidance, Natural England and JNCC conclude that the SBIP proposals do not align with the principles. Therefore, it is our view that the Hornsea Three Offshore Wind Farm Sand Bank Implementation Plans do not offer adequate compensation for the Adverse Effect on Integrity, caused by the lasting/permanent loss to Annex I Sandbank feature in the Wash and

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■ [REDACTED]

Norfolk Coast Special Area of Conservation (SAC) or North Norfolk Sandbanks and Saturn Reef SAC from cable protection within designated sites.

## **References**

Catchpole 2012, Ecological Coherence Definitions in Policy and Practice - Final Report. Contract Report to Scottish Natural Heritage, No. 41102

Defra July 2021, Best practice guidance for developing compensatory measures in relation to Marine Protected Areas

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Natural England. 2021. Natural England's Approach to Offshore Wind. Natural England Technical Information Note, TIN181. Natural England