DOGGER BANK D WIND FARM Benthic Measures of Equivalent **Environmental Benefit**

Roadmap and Evidence (without prejudice)

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Glossary

Term	Definition
DBD Array Area	The area within which the wind turbines, inter-array cables and Offshore Platform(s) will be located.
Deemed Marine Licence (dML)	A consent required under the Marine and Coastal Access Act 2009 for certain activities undertaken within the UK marine area, which may be granted as part of the Development Consent Order.
Development Consent Order (DCO)	A consent required under the Planning Act 2008 to authorise the development of a Nationally Significant Infrastructure Project, which is granted by the relevant Secretary of State following an application to the Planning Inspectorate.
Effect	An effect is the consequence of an impact when considered in combination with the receptor's sensitivity/value/importance, defined in terms of significance.
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, and includes the publication of an Environmental Statement.
Environmental Statement (ES)	A document reporting the findings of the EIA which describes the measures proposed to mitigate any likely significant effects.
Evidence Plan Process (EPP)	A voluntary consultation process with technical stakeholders via Expert Topic Group (ETG) meetings to encourage upfront agreement on the nature, volume and range of supporting evidence required to inform the EIA and HRA process.
Expert Topic Group (ETG)	A forum for targeted technical engagement with relevant stakeholders through the EPP.
Habitat Pagulations	As set out in the Planning Inspectorate's Advice Note 10 (Habitats Regulations Assessment relevant to nationally significant infrastructure projects) the following are covered by the term 'Habitats Regulations': the Conservation of Habitats and Species Regulations 2017 (as amended), and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) (for plans and projects beyond UK territorial waters (12 nautical miles).
παριται πεβιτατιστις	Such regulations set out the requirement for Competent Authorities to consider whether a development will have a likely significant effect (LSE) on a European site (now known as National Network Sites). Where LSE are likely and a project is not directly connected with or necessary to the management of that site(s), an appropriate assessment (AA) is required of the implications of the plan or project for that site(s) in view of its conservation objectives.
HRA Stage 1: Screening	In Stage 1 of the HRA process, European sites are screened for LSE (either alone or in- combination with other plans or projects). Where it can be determined that there is no potential for LSE to occur to qualifying features of a site, that site is sought to be

Term	Definition
	'screened out'.
HRA Stage 2: Appropriate Assessment	In Stage 2 of the HRA process, for sites w Screening, further information to inform Applicant. The assessment will determin could adversely affect the integrity of the objectives. The Competent Authority (CA this Report to Inform Appropriate Assess
Impact	An impact is a change resulting from an a terms of magnitude.
Mitigation Hierarchy	A systematic approach to guide decision hierarchy comprises four stages in order prevent, reduce and offset.
Monitoring	Measures to ensure the systematic and o data related to the implementation and p be undertaken to monitor conditions in t identified by the EIA, the effectiveness of ensure remedial action are taken should All monitoring measures adopted by the Register.
Offshore Development Area	The area in which all offshore infrastruct including any temporary works area durin Mean High-Water Springs.
Offshore Export Cable Corridor (ECC)	The area within which the offshore expor DBD Array Area to Mean High Water Sprin
The Applicant	SSE Renewables and Equinor acting thro Projco Limited .
The Project	Dogger Bank D (DBD) Offshore Wind Far
Wind Turbines	Power generating devices located within from wind into electricity.

where LSE cannot be excluded in HRA Stage 1: an appropriate assessment is prepared by the ne whether the Project alone or in-combination e European site in view of its conservation A) will then draw its own conclusions based on sment (RIAA).

activity associated with the Project, defined in

n-making and prioritise mitigation design. The rof preference and effectiveness: avoid,

ongoing collection, analysis and evaluation of performance of a development. Monitoring can the future to verify any environmental effects of mitigation or enhancement measures or d adverse effects above a set threshold occur.

Project are provided in the Commitment

ture associated with the Project will be located, ing construction, which extends seaward of

rt cables will be located, extending from the ings at the landfall.

ough Dogger Bank Offshore Wind Farm Project 4

m Project

the DBD Array Area that convert kinetic energy

Introduction 1

1.1 Background

- 1. As part of its third licensing round in 2008, The Crown Estate identified the Dogger Bank Zone, located between 125km and 290km off the east coast of Yorkshire, as one of the nine offshore wind farm (OWF) development zones in the UK. Following the 2008 licensing round, four project areas were identified within the zone to take to development consent, namely Creyke Beck A, Creyke Beck B, Teesside A, and Teesside B. In 2015, development consent was granted for all four project areas.
- 2. In 2017, the four project areas were restructured under new ownership arrangements. Creyke Beck A, Creyke Beck B, and Teesside A were renamed as Dogger Bank A (DBA), Dogger Bank B (DBB), and Dogger Bank C (DBC) respectively and would progress collectively as the Dogger Bank Wind Farm in three build-out phases by SSE Renewables, Equinor and Vårgrønn. Teesside B was renamed as Sofia Offshore Wind Farm and would be progressed separately from the Dogger Bank Wind Farm by RWE.
- In 2021, an opportunity was identified by the Applicant to maximise the capacity of the 3. third phase of the Dogger Bank Wind Farm, namely DBC, such that additional capacity of up to 1.5 Gigawatts (GW) of renewable energy could potentially be consented and constructed in the eastern part of the original DBC site. This new development phase is known as Dogger Bank D (DBD), and is an independent project being promoted by a separate commercial entity from the previous phases of the Dogger Bank Wind Farm.
- The Dogger Bank D Offshore Wind Farm (hereafter referred to as the "Project") is a 4. proposed OWF located on a shallow sandbank known as the Dogger Bank in the North Sea. The DBD Array Area covers an area of approximately 262km² and is located approximately 210km off the north-east coast of England. The Project will have an overall capacity of over 100 Megawatts (MW) and therefore constitute a Nationally Significant Infrastructure Project (NSIP) under Section 15 (3) of the Planning Act 2008. Full details are presented in the Project Description (Volume 1, Chapter 4 Project Description).
- 5. SSE Renewables and Equinor acting through 'Dogger Bank Offshore Wind Farm Project 4 Projco Limited', hereafter referred to as 'The Applicant' is applying for a Development Consent Order (DCO) under the Planning Act 2008, supported by a range of plans and documents, including an Environmental Statement (ES), which will set out the results of the Environmental Impact Assessment (EIA). The Applicant has also provided a draft Marine Conservation Zone Assessment (MCZA) alongside the Preliminary Environmental Information Report (PEIR) for consultation. When submitted as final, these documents will set out the information necessary for the competent authority (CA), in this case the Department of Energy Security and Net Zero (DESNZ) Secretary of State (SoS), to undertake a MCZA to determine if the plan or project could potentially affect the conservation objectives for the site. That is, affect the site so that the features are no

longer in favourable condition, or prevent the features from recovering to a favourable condition. If the CA cannot satisfy itself that there is no significant risk of the activity hindering conservation objectives, and if no alternative approach presents a substantially lower risk, then Measures of Equivalent Environmental Benefit (MEEB) may be required under Section 126 of the Marine and Coastal Access Act (MCAA) 2009.

- 6. Subsection 7(c) of the MCAA states that if an activity poses a significant risk to the conservation objectives of a Marine Conservation Zone (MCZ), the CA may only permit it if "the person seeking the authorisation will undertake, or make arrangements for the undertaking of, measures of equivalent environmental benefit to the damage which the act will or is likely to have in or on the MCZ". Additionally, as outlined in subsection 9, the CA must "if it has power to grant the authorisation subject to conditions, exercise that power so as to make it a condition of the authorisation that the measures mentioned in subsection 7(c) are undertaken".
- 7. In 2023 The Crown Estate confirmed that a Plan-Level MCZ Assessment (MCZA) would be undertaken to assess the collective environmental impact at plan level of DBD together with six other offshore wind projects identified in either The Crown Estate's Offshore Wind Leasing Round 3, or The Crown Estate's 2021 Offshore Wind Extensions opportunity, collectively known as the Capacity Increases Programme (CIP). The Crown Estate's Capacity Increase Programme (CIP) Plan Level MCZ Assessment was published in March 2025 (The Crown Estate, 2025). In relation to Holderness Inshore MCZ, the CIP MCZA concludes uncertainty regarding the feasibility of impact mitigation options within Holderness Inshore MCZ, thus concluded a review of potential MEEB should be prepared at the project level as necessary. This document sets out the Applicant's roadmap for securing and delivering MEEB, taking into account the CIP MCZA and the project level MCZA (which reflects the detailed project level assessment).
- 8. This MEEB roadmap has been prepared on a 'without prejudice' basis. Details of predicted Project impacts to the Holderness Inshore MCZ at this stage are detailed in Section 1.2 and in further detail in the MCZA (Stage 1 MCZA, Document Reference **7.11**).

1.2 Approach to MEEB

- 9. Based on the information presented in Stage 1 MCZA, Document Reference 7.11, which includes assessments on the relevant broadscale habitats and features of geological interest, it can be concluded that the conservation objective of maintaining the protected features of the Holderness Offshore MCZ in favourable condition, or restoring them to favourable condition, will **not be hindered** by the construction, operation and maintenance, and decommissioning phases of the Project, or cumulatively with any other plan, project or activity.
- Given only temporary physical disturbance / temporary habitat loss effects from vessel 10. anchors will occur as a result of the Project on the Holderness Offshore MCZ (see

Section 10.5.9.2 of Stage 1 MCZA, Document Reference 7.11), the Applicant concludes that in-principle MEEB proposals are not required to be developed for the Holderness Offshore MCZ. The Holderness Offshore MCZ is not discussed further in this roadmap.

- 11. At this stage the worst-case scenario (WCS) for the Holderness Inshore MCZ includes the exit pits for the trenchless installation of the cable at the landfall and export cable routeing in the subtidal zone. The Stage 1 MCZA concludes that the conservation objective of maintaining the protected features of the Holderness Inshore MCZ in a favourable condition will **not be hindered** by habitat loss / alteration impacts related to the operation of the Project.
- 12. External cable protection may be required to ensure the integrity of export cable assets is maintained however, will only be used as a last resort inside the Holderness Inshore MCZ. Burial of cables is the preferred protection solution, but where initial cable burial is not successful, the Applicant will seek to undertake remedial burial operations prior to resorting to cable protection measures. A WCS is considered by the Applicant in accordance with National Policy Statement (NPS) EN-3 (paragraph 2.6.43). The requirement for cable protection will continue to be reviewed and refined while the Project Design Envelope evolves as further technical information becomes available.
- 13. There is also potential for refinements in routing and burial techniques, to reduce the final footprint on Holderness Inshore MCZ. Two trenchless installation approaches are currently being considered in the Project Design Envelope, which can be found in Volume 1, Chapter 4 Project Description. The first approach is drilling perpendicular to the coastline, the second option is aligned in a north-easterly direction, exiting outside of the Holderness Inshore MCZ, which requires a greater length of trenchless installation and coordination with the Dogger Bank South export cable route. This second option is currently being reviewed as an option to remove direct impacts to the Holderness Inshore MCZ. At this stage, the Project is assessing the technical design of the second installation option and engaging with Dogger Bank South to enable coordination of the routes. The interface between the Offshore and Onshore Development Areas has been defined to allow flexibility to accommodate the two approaches.
- 14. However, due to the potential technical challenges presented by any such measures and the need for coordination by a third party, a WCS in relation to effects on the features of the Holderness Inshore MCZ must be assumed at this stage
- Holderness Inshore MCZ The WCS habitat loss / alteration within the Holderness 15. Inshore MCZ from external cable protection where adequate burial has not been achieved and at the exit pit transition zone is anticipated to be 29,700m² which equates to <0.01% of the MCZ area. The MCZA (Stage 1 MCZA, Document Reference 7.11).
- Further detail on impacts associated with the Project is covered in the MCZA (Stage 1 16. MCZA, Document Reference 7.11).

- The Applicant has been cognisant of conclusions drawn by the SoS for other OWF 17. developments regarding project impacts hindering the conservation objectives of MCZs and specifically the subtidal sediment features as a result of the potential deployment of rock protection within a sensitive area. The Applicant also understands the complexity of identifying and delivering MEEB, therefore understands the need to give early consideration to these matters with as much detail as possible, so that constructive engagement on the issues can be undertaken during the pre-application period to support the consultation and assessment of the Project. Therefore, the Applicant is proceeding on a 'without prejudice' basis for MEEB for the Holderness Inshore MCZ in the event this is deemed required.
- 18. Department for Environment, Food and Rural Affairs (Defra) guidance (Defra, 2021) on MEEB implementation states that all necessary measures should be taken forward to ensure that the overall coherence of the Marine Protected Area (MPA) network is secured. It asserts that developers with unavoidable impacts should consider the derogation route or the requirement to satisfy the appropriate authority that there is no adverse effect. This should be done early in the consenting or authorising process to ensure that developers can deliver measures within reasonable timeframes (Defra, 2021).
- 19. As part of the process of developing the 'without prejudice' MEEB for Holderness Inshore MCZ, the Applicant has developed a 'longlist' and refined to a 'shortlist' of possible MEEB options based on the Project Design Envelope, its understanding surrounding recent DCO decisions which have been consented based on protected sites derogation and compensation, and stakeholder engagement.

1.3 Purpose of this Document

- 20. This document introduces the potential MEEB options required to support a derogation case in the event it should be needed under the MCAA on a 'without prejudice' basis. The requirement for MEEB relates to a potential impact of habitat loss associated with external cable. Shortlisted MEEB options being considered by the Applicant are:
 - Restoration of linear features within the MCZ:
 - Habitat restoration in the form of native oyster bed habitat; and •
 - Designating new MPA and/or extending existing MPAs. •
- 21. Further details and justifications on the longlisting and shortlisting process are presented in Section 3.4.
- 22. This document supports the Project's PEIR and associated consultation under Section 42 of the Planning Act. Its purpose is to present progress on proposed MEEB options, gather stakeholder feedback on processes, data, and assumptions used to determine these measures, and identify any additional factors to consider ahead of a formal

submission to the Planning Inspectorate (PINS). This document also presents a draft roadmap for delivering MEEB as the Project progresses, including a timeframe for delivery and consideration of adaptive measures.

1.4 Consultation

23. Stakeholder engagement with Natural England, the Marine Management Organisation (MMO) and Joint Nature Conservation Committee (JNCC) has been established through the Evidence Plan Process (EPP) and has continued as the Applicant has made progress with its MEEB options. Engagement has also taken place with The Crown Estate, Defra, PINS and DESNZ. To date, the Applicant has participated in key consultation events with stakeholders on the dates listed in Table 1-1. Additional detail on consultation forums and communications are presented in **Table 1-2.** Further details on consultation are provided in the Environment Statement Volume 1, Chapter 7 Consultation.

Date	Meeting Forum & Focus	Attendees
16 October 2023	Expert Topic Group (ETG) 5 (meeting 1) - Seabed Compensation (Habitats Regulation Assessment (HRA) and MEEB)	Natural England, MMO & JNCC
July 2023 - present	Monthly Project meetings with Natural England (attended regularly to discuss compensation matters in addition to wider development topics)	Natural England
July 2023 - present	Monthly meetings to discuss Project progress and matters relating to derogation and compensation.	ММО
15 February 2024 8 March 2024 10 May 2024 29 August 2024 6 February 2025	Meetings to discuss Project progress, matters related to compensation and receive feedback from Defra.	Defra (strategic compensation team)
2 May 2024	ETG 5 Meeting 2 - Seabed Compensation (HRA and MEEB)	Natural England, MMO & JNCC

Table 1-1 Summary of Stakeholder Engagement

In October 2024, Natural England informed the Applicant that they would not be able to 24. engage with ETG 5 until after the Project's PEIR is submitted, and the Capacity Increase Programme (CIP) Plan Level HRA has concluded, citing primarily resourcing constraints. Following this withdrawal by Natural England from the ETG 5 process, the MMO and JNCC noted that they did not feel it was appropriate to continue with the ETG 5 in Natural England's absence.

25. In the absence of ETG 5 meetings, briefing materials in the form of a Benthic Compensation and MEEB Evidence Update was submitted to Natural England on 24 March 2025. Natural England provided a written response to the evidence update on 24 April 2025 (DAS/509197). Relevant consultee responses to the proposed MEEB options to date and the Applicant's response to these are presented in Table 1-2-2.

Table 1-2 Consultee Responses in Relation to Benthic Measures of Equivalent Environmental Benefit (MEEB)

Consultee	Comment	Applicant Response
Approach to MEEB		
Statement made by Natural England at ETG 5 Meeting 1		
16 October 2023		
&		The Applicant acknowledges the advice from
Natural England -	Natural England emphasised the need to take caution when considering the sensitivity of protected features models within the Holderness Inshore MCZ, especially circalittoral rock. Natural England also provided guidance that concompensation does not need to provide net gain, thus compensation measures that affect the target features but not others should not be scored lower than measures that benefit multiple Protected Features. Should not be scored lower than measures that benefit multiple Protected Features.	compensation hierarchy. MEEB options suc
Dogger Bank D MCZA Screening Report		both within and outside of the Holderness shortlisting process to deliver benthic MEEB
(DAS/482882)		In Section 3.4.
24 July 2024		

Longlist MEEB: Restoration of Linear Features

Statement made by Natural England at ETG 5 Meeting 1 16 October 2023 & Statement made by Natural England at ETG 5 Meeting 2 2 May 2024 & Written Response to ETG 5 Meeting 2 from Natural England 20 May 2024	Natural England suggested the restoration of clay features (i.e. the restoration of 'linear' features) using boulders within the Holderness Inshore MCZ as a MEEB option.	The Applicant acknowledges the advice prov location and potential extent of damage/lo result of historic activities. Further detail on Table 3-1 and Section 4.2 .
Natural England written response to 'Dogger Bank D Benthic Compensation and Measures of Equivalent Environmental Benefit' report DAS/509197 24 April 2025	Natural England stated that: "Following confirmation of the export route, if similar features (represented by circalittoral rock) are not expected to be impacted, then this measure would be considered less favourably against the best practice hierarchy (offering only comparable ecological function rather than the same), but that is not to say the option should discounted entirely. We do, however, understand that wider concerns might make this option difficult to advance, including uncertainty around difficulty in securing appropriate glacial material, technical delivery, and potential environmental impacts and appreciate that the Project may choose to remove this option based on these constraints."	The Applicant welcomes Natural England's r significant challenges relating to technica considering this option and as such do not vi of this measure can be found in Table 3-1 ar

n Natural England and has considered potential f the protected features of the site and Defra's ch as habitat restoration are being considered s Inshore MCZ. Details on the longlisting and 6 for the Holderness Inshore MCZ are presented

vided by Natural England and has researched the bass to these clay features within the MCZ as a n the feasibility of this measure can be found in

response. The Applicant understands there to be al delivery, and ecological suitability in when view it as feasible. Further detail on the feasibility and **Section 4.2**.

Consultee	Comment	Applicant Response
Longlist MEEB: Habitat Resto	ration (Oyster Reef Restoration)	
	A potential delivery partner (Blue Marine Foundation (BMF)) informed the Applicant that they do not have the capacity to support the Project in implementation but can provide advisory services.	
Meeting with potential delivery partner on 25 February 2025	While BMF did not have the ability to deliver this measure at present, some recommendations were made. A key recommendation was that, when progressing with any site selection process, the focus should be on current site conditions suitable for oyster establishment rather than relying solely on historical data which may no longer reflect present suitability. BMF also recommended that although larger restoration sites are more likely to become self-sustaining, selecting two to three medium sized sites across various locations would offer resilience against site failure.	The Applicant acknowledges the valuable gui engage with them to incorporate their experti ecological merit of this measure are presente
Natural England written response to 'Dogger Bank D Benthic Compensation and Measures of Equivalent Environmental Benefit' report DAS/509197 24 April 2025	Natural England stated that: "Natural England see ecological value in the restoration of native oysters in places where these biogenic reefs were historically present, and conditions are known to be suitable to support such a complex ecosystem. As such, restoration proposals are considered on a case-by-case basis in the context of the surrounding seascape. Whilst native oysters were historically distributed in few discrete areas off the East Yorkshire coast, they were not known, to our knowledge, to be within the Holderness Inshore MCZ. It is not clear from the document provided whether the Project are proposing restoration measures to take place within or outside the MCZ, but due to the above reason we are not likely to support this measure within the protected area. However, given the wide range of ecosystem services that native oyster reefs provide, there may be potential for comparable ecological function, to some degree, to be achieved outside of the site boundary, dependent on the location, scale and methodology of restoration. This measure, however, would be considered lowly against DEFRA's compensation hierarchy ("comparable function at different location"), and likely with low confidence in the outcome. Nonetheless Natural England will engage further with the Project on proposals for this measure and welcome that collaboration opportunities are being discussed with other projects and partnerships."	The Applicant agrees with Natural England the reefs are numerous and could offset imported Holderness Inshore MCZ. The Applicant is fur outside of the MCZ and will undertake a site options, to ascertain a scheme would prov success. Further details on the ecological m 4.3.

Longlist MEEB: The new designation of an MPA and / or extension of existing MPAs

Written Response to ETG 5 Meeting 2 from Natural England 20 May 2024 (DAS/475170)	Natural England expressed concern regarding the designation of new MPA and / or extension of existing MPA as an option for MEEB as it was unclear at the time as to whether strategic compensation would deliver MEEB options.	The Applicant acknowledges Natural Englan be delivered by developers alone but shoul Recovery Fund (MRF). Since this commen Defra's written ministerial statement that th as MEEB (Defra, 2025). Further details of MI Section 4.4.
Response submitted by the Applicant to DESNZ Call for information Submitted 7 June 2024	Following the DESNZ 'Call for Information' request, the Applicant submitted a response to the 'Benthic Strategic Compensation Questionnaire' on the 7 June 2024. The questionnaire included details on whether the Applicant intends to propose MPA designation as a benthic compensation measure, as well as identifying the likely MPAs that may be impacted the Project.	The Applicant shared information on pote habitat loss to DESNZ and confirmed that the of 2024 has provided understanding of habit has been incorporated in the MCZA (doo roadmap. Further detail on the ecological habitat that the Project may impact is presen
Natural England written response to 'Dogger Bank D Benthic Compensation and Measures of Equivalent Environmental Benefit' report	Natural England stated that:	The Applicant welcomes Natural England's continue to engage with key stakeholders ind measure. Further details on the ecological habitat that the Project may impact is preser

idance provided by BMF and will continue to tise as appropriate. Further details on the ed in **Section 4.3.**

that the ecosystem services provided by oyster bacts associated with habitat loss within the inther considering an oyster restoration scheme e selection exercise to better define the delivery vide the best ecological value and chances of merit of this measure are presented in **Section**

nd's concerns and notes that this option cannot ald be delivered strategically through the Marine nt was made, there has been confirmation via his measure will be available for implementation 1EEB shortlisting are presented in **Table 3-1** and

ntial areas and distances related to potential e data collected from benthic surveys in summer tat boundaries within the MCZ. This information cument reference 5.3) and subsequently this merit of this measure to compensate for the nted in **Section 4.4**.

s feedback regarding this MEEB option and will cluding Defra and DESNZ on the progress of this l merit of this measure to compensate for the nted in **Section 4.4.**

Consultee	Comment	Applicant Response
DAS/509197	"At a high level, it is our understanding that compensation of impacts to MCZ features will be included within	
24 April 2025	the strategic designation / extension of MPA(s), if a Project's estimated impacts to MCZ features have been considered by DESNZ in advance of designation/extension, following their call for information on quantities. Without seeing the Project's Stage 1 MCZ assessment, nor having insight on the nature or location of the potential MPA site extension / designation, Natural England cannot comment further on the comparability in ecological function between potential impacted features and potential strategically- protected features. We advise the Project to continue to engage with DESNZ and DEFRA and await further updates as this measure takes shape."	

Longlist MEEB: Removal of Pressures

Written Response to ETG 5 Meeting 2 from Natural England 20 May 2024 (DAS/475170)	Natural England emphasised that MEEB must satisfy the additionality requirement and expressed concern that this may be hard to achieve through the removal of demersal trawling and dredging whilst the MMO are in the process of considering the impacts of bottom towed fisheries within designated sites. The management of fishing as MEEB falls within the remit of the Inshore Fisheries and Conservation Authorities (IFCAs) and the MMO (for offshore territorial waters) and would be precluded on the basis of additionality. Natural England stated they do not support the removal of buried infrastructure but do support the removal of surface-laid oil and gas infrastructure within the MCZ.	The Applicant notes Natural England's p shortlisting process. In July 2023, the Offsh Decommissioning (OPRED) released a pap removing pipelines and other oil and gas inf they would not support this measure and cau developers taking on liability in perpetuity should technical failure occur during ren timescale likely to be associated with achiev whether the work would ultimately lead to th Though there is ecological merit to the mana- remit of the IFCAs (for inshore waters) and th offshore territorial waters) and, as such, would The Applicant has investigated the possibili- but this was not considered suitable for MEE below.
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Longlist MEEB: Spurn Head Defence

	Statement made by Natural England at ETG 5 Meeting 2		
	2 May 2024		
	&	Natural England noted they do not consider the intervention at Spurn Head to be an appropriate MEEB option for	The Applicant notes Natural England's po further.
	Written Response to ETG 5 Meeting 2 from Natural England	this Project.	
	20 May 2024		
	(DAS/475170)		
-	Natural England written response to 'Dogger Bank D Benthic Compensation and Measures of Equivalent Environmental Benefit' report DAS/509197	Natural England stated that: "Natural England have no further comment to make regarding our advice on Spurn Head, resolution of data gaps and sediment volume restoration, and agree with the Project's conclusions on suitability and/or feasibility of these."	The Applicant welcomes the clarity that t regarding the lack of suitability for this optio

position and has considered this during the hore Petroleum Regulator for Environment and per clarifying their position on the potential for frastructure (OPRED, 2023). OPRED stated that utioned that to do so would involve offshore wind y, including for environmental consequences, moval. OPRED also highlighted the extended ving required consents, and the uncertainty over ne anticipated environmental improvements.

agement of fishing as MEEB, this falls within the ne Marine Management Organisation (MMO) (for uld be precluded on the basis of additionality.

ity of managing aggregate extraction activities, EB. Further details are provided in **Section 3.4.2**

osition and has not considered this measure

this statement from Natural England provides on.

Consultee	Comment	Applicant Response
24 April 2025		

Longlist MEEB: Enhancement of Ocean Quahog (Arctica islandica) Habitat

Written Response to ETG 5 Meeting 2 from Natural England	Natural England noted they "are not supportive of the proposal to enhance ocean quahog habitat. It would be very difficult to monitor and prove the efficacy of this measure."	The Applicant notes Natural England's pos
20 May 2024		further.
(DAS/475170)		

Longlist MEEB: Resolution of Data Gaps

Natural England and JNCC Annex 1: SNCB (Natural England and JNCC) comments on longlist of potential compensatory measures.31 October 2023 (DAS/426551) & Written Response to ETG 5 Meeting 2 from Natural England 20 May 2024 (DAS/475170)	SNCBs have acknowledged the need to resolve data gaps within the Holderness Inshore MCZ but have stated that this measure would need to act alongside further MEEB in order to qualify as providing MEEB.	The Applicant acknowledges the position tal
Natural England written response to 'Dogger Bank D Benthic Compensation and Measures of Equivalent Environmental Benefit' report DAS/509197 24 April 2025	Natural England stated that: "Natural England have no further comment to make regarding our advice on Spurn Head, resolution of data gaps and sediment volume restoration, and agree with the Project's conclusions on suitability and/or feasibility of these."	The Applicant welcomes the clarity that this regarding the lack of suitability for this optio

Long list MEEB: Fisheries management

Letter Issued to Applicant by Natural England (DAS/475170) 20 May 2024	Natural England provided guidance on an alternative MEEB option that the Applicant could explore reducing nomadic scallop fleet dredging within the Holderness Offshore MCZ through the restriction of vessel access.	The Applicant appreciates the guidance investigation, the Applicant holds the positic of fishing activity falls within the remit of the precluded on the basis of additionality.
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sition and has not considered this measure

aken by SNCBs.

s statement from Natural England provides on.

from Natural England, however, after further on that this option is not viable; the management ne IFCAs and the MMO and, as such, would be

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Consultee	Comment	Applicant Response			
Project Eligibility for Strateg	Project Eligibility for Strategic Benthic MEEB Options				
Statement made by Defra during email exchange with the Applicant Recieved14 November 2024 & Letter issued by Defra to Head of Offshore Development, SSE Renewables Issued 13 February 2025	Defra have confirmed "Dogger Bank D will be within scope as a project which was awarded rights in The Crown Estate Round 3 or The Crown Estate 2017 Extensions Round" and DBD "is categorised as a Round 3 project and is therefore listed as eligible in the Written Ministerial Statement."	This advice informed the shortlisting of po Applicant with confidence that it is eligible for habitats within MPAs. The Applicant has con and MEEB strategic compensation scheme a to Defra and Natural England. More details regarding this option are in Table			
Defra Meeting 6 February 2025	Defra advised that there are four mechanisms for designations that are currently under consideration, including: the designation of new MPAs; the extension to existing MPAs; the addition of features to existing MPAs and the overlaying of different designation types. Defra noted it is too early to specify the locations / exact numbers of MPAs they are considering for designation, thus it is recommended that it should be assumed all suitable areas are under consideration for designation. Defra also highlighted that designation of new MPA and / or extension of existing MPAs will not necessarily be in the same areas as the projected impacts.	The Applicant acknowledges Defra's response of a new MPA and / or extension of an exis temporary long-term loss of sedimentary br Inshore MCZ. The Applicant will continue to p with them regarding the development and o their WMS, Defra have expressed the hope of 2025.			
Natural England written response to 'Dogger Bank D Benthic Compensation and Measures of Equivalent Environmental Benefit' report DAS/509197 24 April 2025	Natural England stated that: "At a high level, it is our understanding that compensation of impacts to MCZ features will be included within the strategic designation / extension of MPA(s), if a Project's estimated impacts to MCZ features have been considered by DESNZ in advance of designation/extension, following their call for information on quantities."	The Applicants have submitted their predicted MCZ to DESNZ following an industry wide call f of a new of extended MPA. These WCS values will continue to engage with key stakehold including Defra and DESNZ.			
Continued Engagement thro	ugh the EPP				
Email exchange between Natural England and the Applicant	Natural England informed the Applicant that they will not be able to engage further with the ETG 5 until after the	The Applicant acknowledges the limited avail third ETG 5 meeting was cancelled due to limi			

	Received 01 October 2024	End out the with drawed by Natural England from the ETC 5, the MMO and the INCC confirmed that they did	In lieu of continued engagement via E
	Following this withdrawal by Natural England from the ETG 5, the MMO and the INCC confirmed that they did	Evidence Update note (issued 24 Marcl	
	&	not feel it was appropriate to continue with the EIG 5 in Natural England's absence.	shared with Natural England seeking th
	Statement at monthly Natural	However, Natural England subsequently confirmed engagement on MEEB can continue and they could provide	advice on 24 April 2025 (DAS/509197
	England and DBD Project	in-principle advice where required subject to specialist availability. Natural England suggested making use of	updates on MEEB matters where require
	Meeting	bilateral monthly meetings and the Discretionary Advice Service (DAS) to engage further on MEEB.	as Natural England availability allows.
			England via their DAS and the EPP.
	Received 09 October 2024		

otential MEEB options and has provided the r strategic compensation for impacts to benthic ntinued to monitor the progress of the benthic and has expressed its support for the measure

le 3-1.

se and has continued to pursue the designation isting MPA as a strategic MEEB option for the proadscale habitat features in the Holderness provide updates to Defra and seek engagement operation of strategic compensation. Through of having a long list of potential sites by Spring

ed WCS impacts within the Holderness Inshore Il for information to support with the designation es have since been updated and the Applicants Iders regarding the progress of this measure

ilability of stakeholders to attend ETGs and the nited availability for attendance.

ETG 5 meetings, a Benthic Compensation and MEEB ch 2025), including details on MEEB progression, was cheir advice. Natural England responded with written 7). The Applicant intends to continue with written red with an intention to restart ETG 5 meetings as soon . The Applicant will continue to engage with Natural

2 The Holderness Inshore Marine Conservation Zone

2.1 Overview

- 26. The Holderness Inshore MCZ is located north of the Humber Estuary and extends out from the mean high-water mark (MHWM) to 3 nautical miles (NM). The site covers an area of approximately 309km² and has a maximum water depth of 15m. The Holderness coastline is predominantly composed of post glacial deposits and is one of the fastesteroding coastlines in Europe, with average sediment loss rates at approximately 2m per year (Sistermans & Nieuwnhuis, 2013). The eroded sediment is transported southward and deposits at Spurn Head, a distinctive spit that stabilises parts of the Humber Estuary (Natural England, 2023).
- 27. The Holderness Inshore MCZ is located wholly within 12NM limit and therefore site management is provided by Natural England.
- The site is designated under Section 116 of the Marine and Coastal Access Act 2009 for 28. the following broadscale sediment habitats (BSH) and a geomorphological feature:
 - High energy circalittoral rock (A4.1) BSH;
 - Intertidal sand and muddy sand (A2.2) BSH;
 - Moderate energy circalittoral rock (A4.2) BSH;
 - Subtidal coarse sediment (A5.1) BSH;
 - Subtidal mixed sediments (A5.4) BSH;
 - Subtidal sand (A5.2) BSH; •
 - Subtidal mud (A5.3) BSH; and
 - Spurn Head (subtidal) and "the binks" geomorphological feature.
- 29. The Holderness Inshore MCZ is characterised by a variety of benthic habitats provided by the different seabed sediments (Natural England, 2023). The intertidal area is a long open beach comprised of fine sands and mud which is uncovered at low tide. The subtidal area is composed of high and moderate energy circalittoral rock, subtidal mud, coarse sediment and sand (Franco & Musk, 2022).
- 30. The subtidal areas of the Holderness Inshore MCZ provide foraging and nursery grounds for benthic, demersal and juvenile fish including some elasmobranch species such as smooth-hound Mustelus mustelus. The circalittoral environments host a variety of sessile organisms including cup corals, sea fans, anemones and sponges (Defra, 2023).

Mobile taxa such as common starfish Asterias rubens, small brittlestars Amphipholis squamata, and sea urchins Echinoidea, are abundant within the subtidal areas and interact with the sessile communities. Hydroid and bryozoan turf form dense assemblages on patches of harder substrate which create microhabitats for species including commercially important crustaceans like the edible crab Cancer pagurus and the velvet swimming crab Necora puber, making these species abundant within the Holderness Inshore MCZ (Franco & Musk, 2022).

- 31. The main pressure on the Holderness Inshore MCZ historically has been bottom trawling by commercial fisheries. While this activity has been limited by the introduction of byelaws, fishing activity is still permitted within the Holderness Inshore MCZ so long as a permit is secured, and a number of conditions are applied. In addition to pressures exerted by fishing activity within the MCZ, it is predicted by Natural England (Natural England, 2023) that ongoing activities which could put pressure on maintaining and restoring the condition of the MCZ will be through installation and/or removal of infrastructure, namely:
 - Offshore wind farms;
 - Cabling; and •
 - Oil and gas industry activities.
- 32. The WCS for long term temporary habitat loss / alteration within the Holderness Inshore MCZ from external cable protection is anticipated to be 29,700m², which equates to <0.01% of the Holderness Inshore MCZ area. External cable protection may be required in locations where an adequate degree of cable burial has not been achieved, and at the exit pit transition zone. External cable protection is considered by the Applicant as a WCS inside the Holderness Inshore MCZ to ensure the integrity of export cable assets is maintained. Burial of cables is the preferred protection solution, but where initial cable burial is not successful, the Applicant may seek to undertake remedial burial operations prior to resorting to cable protection measures. For further details on the Project Design Envelope please refer to Volume 1, Chapter 4 Project Description and commitments in Volume 2, Appendix 6.3 Commitments Register.

2.2 **Conservation Objectives**

- 33. The conservation objectives for the BSH features of the Holderness Inshore MCZ are to ensure that, subject to natural change, the designated features are maintained in favourable condition. To achieve this, each designated feature must either be maintained or recovered to favourable condition. For each marine BSH, a favourable condition means that, within the MCZ:
 - Its extent is stable or increasing.

- Its structure and functions, its quality, and the composition of its characteristic biological communities (including diversity and abundance of species forming part or inhabiting the habitat) are sufficient to ensure that its condition remains healthy and does not deteriorate.
- Any temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable its recovery.
- Any alteration to a feature brought about entirely by natural processes is to be disregarded when determining whether a protected feature is in favourable condition.
- 34. To date, no assessment on the condition of the features of this site has been conducted by Natural England. The current stated management approach for each of the listed attributes of each of the BSH which may be directly impacted is to "maintain" in favourable condition. This target has been set in accordance with the MCZ General Management Approach which is based on the application of a vulnerability assessment at the time of designation (Natural England, 2023).
- 35. Natural England note in their advice that any temporary deterioration of condition is to be disregarded if the habitat is sufficiently resilient and healthy to support its recovery (Natural England, 2023).

2.3 Summary of Potential Impact

36. The MCZA states that the extent, distribution and structure of sediment features will largely be maintained across the Holderness Inshore MCZ. The WCS suggests that Subtidal coarse sediment (A5.1), Subtidal sand (A5.2) and Subtidal mixed sediment features (A5.4) will potentially be impacted by external cable protection in areas where the target depth for cable burial cannot be achieved and at the HDD exit pit transition zone. The estimated WCS footprint on those features is outlined in **Table 2-1**. Ongoing work and the cable burial risk assessment (CBRA) will determine a refined extent of cable protection. However, the final design and requirements cannot be defined until consent is secured, a cable installation contractor has been appointed and the ground investigation works completed. For further details on the Project Design Envelope please refer to Volume 1, Chapter 4 Project Description and commitments in Volume 2, Appendix 6.3 Commitments Register.

Table 2-1 Maximum Extent of Habitat Loss/Alteration of the Holderness Inshore MCZ designated features during the Operational and Maintenance phase.

Protected Feature	Spatial Extents (km²)	Area of overlap (km²)	Percentage of overlap with the MCZ Protected Feature
Intertidal sand and muddy sand (A2.2)	0.24	0	0
Moderate energy circalittoral rock (A4.2)	2.12	0	0
High energy circalittoral rock (A4.1)	2.12	0	0
Subtidal coarse sediment (A5.1)	202.31	0.01278	0.006
Subtidal sand (A5.2)	18.56	0.00525	0.028
Subtidal mud (A5.3)	0.00	0	0
Subtidal mixed sediments (A5.4)	80.83	0.01167	0.014
Spurn Head (subtidal)	-	-	-

3 Approach to MEEB

3.1 Guidance

- 37. Defra and Natural England provide specific guidance on the delivery of compensation, which can be applied for MEEB. This guidance has been followed in developing the MEEB process.
- 38. Defra's compensation hierarchy, outlined in their best practice guidance (Defra, 2021), prioritises:

Step 1: Address same impact at same location.

Step 2: Same ecological function different location.

Step 3: Comparable ecological function same location.

Step 4: Comparable ecological function different location.

- 39. This hierarchy was considered when devising the longlist and shortlist of the potential MEEB options to prioritise those which deliver at the highest possible level on the hierarchy.
- 40. Natural England's checklist for compensatory measures (Natural England, 2021) ensures that MEEB plans meet legal and ecological standards. The checklist is intended to cover aspects of compensatory measures that need to be described in detail when developers are submitting or updating applications where impacts on MPAs are anticipated. Whilst not exhaustive, it lists key areas where sufficient detail is needed to provide the SoS with appropriate confidence that the measures can be secured. This report presents a checklist for each of the proposed measures in Section 5.

3.2 **Delivery** Approach

The Applicant has considered three types of approach to deliver MEEB: Project alone, 41. collaborative, and strategic measures. Through the longlisting and shortlisting process, the Application has sought to consider all potentially feasible MEEB options which could be delivered strategically, collaboratively or as project alone.

Project Alone Measures: These are project alone options tailored to address the ecological impacts of a specific OWF development. They focus on mitigating the precise effects of the Project, such as habitat restoration or creation, aimed at offsetting local environmental damage.

Collaborative Measures: These involve working with one or more developers either multilaterally or facilitated through an industry body, to implement MEEB strategies that benefit a broader ecological area or species. They aim to address cumulative impacts across multiple projects or regions, often through shared funding or joint efforts and theoretically have a wider delivery scope than project alone delivery.

Strategic Measures: These are long-term, large-scale initiatives aimed at improving overall ecological resilience at a regional or national level. They are led by other stakeholders, such as government and industry bodies. They focus on achieving broader conservation goals that wouldn't be deliverable by a single project and are often planned and implemented over extended periods, potentially beyond the life of a single OWF project.

Details of the considered delivery mechanisms for each of the long-listed MEEB have 42. been included in Section 3.4.2.

3.3 Strategic MEEB Delivery

- 43. A key challenge in delivering ecological compensation (including MEEB) is ensuring that measures are secure and robust in the eyes of regulators and their advisors. To address this Defra, since 2021, has been developing a library of ecologically robust strategic compensation measures in partnership with industry and SNCBs. The Applicant has been fully engaged with this consultation process though the Offshore Wind Industries Council (OWIC) Pathways 2 Growth programme.
- Defra's (Defra, 2021) definition of 'strategic compensatory measures' is measures: "that 44. work across a wide area, joining-up across projects and organisations to deliver an ecological benefit greater than the sum of its parts and/or measures that can only be delivered by Government (e.g., enhanced protection of MPAs)."
- 45. To alleviate pressures associated with delivering compensation and MEEB, Defra's Offshore Wind Environmental Improvement Package (OWEIP), a key part of the British Energy Security Strategy (BESS) was announced in 2022 (UK Government, 2022). This was designed to shorten OWF consent timelines while protecting the marine environment and ensuring that key environmental targets are met. As part of the OWEIP, a set of ecologically robust strategic compensation measures were agreed upon to speed up deployment and provide security for eligible developers who could be secure in the knowledge that particular measures had been centrally approved by DESNZ, SNCBs, devolved administrations and Nongovernmental Organisations (NGOs). The OWEIP is being developed by UK Government to help offshore wind project applicants address unavoidable impacts to MPAs at a strategic level, facilitated through the MRF into which applicants can choose to pay to discharge environmental compensation and MEEB obligations.
- The Energy Act (2023), provides the legislative basis for OWF developers to be able to 46. adopt strategic compensation measures, provided they have exhausted all options to

mitigate impacts of development through the application of the mitigation hierarchy. The Applicant notes that secondary legislation will also be required to set up and operate the MRF. At present, the timeline of this secondary legislation is not yet available.

- 47. Further commitment and information on the ability of OWF developers to rely on the delivery of the MRF was provided by the publication of DESNZ Strategic Compensation Measures for Offshore Wind Activities: Marine Recovery Fund Interim Guidance and in Defra's Written Ministerial (WMS) Statement (Defra, 2025). The purpose of the DESNZ Interim Guidance is to set out how projects can refer to strategic compensation measures in the OWEIP Library of Strategic Compensation Measures (LoSCM). This guidance sets out that the MRF will encompass compensation required under the "Habitats Regulations" and MEEB under the Marine and Coastal Access Act 2009. The DESNZ guidance was accompanied by Defra's WMS (Defra, 2025) which commits Defra to designating new MPAs and / or extending existing MPAs to deliver sufficient strategic compensation for likely environmental effects of offshore wind developments. Crucially the statement also clarifies which projects are eligible for this measure. The WMS also asserts that the size of strategic compensation to be delivered by Defra will be sufficient to account for essential maintenance activities required during the operational phase for eligible projects (including CIP Plan Level developments), extending the scope of this measure beyond development impacts alone.
- 48. The Interim Guidance further states that where it refers to the term 'compensation' or 'compensation measure', this should be understood to mean both HRA compensation and MEEB.
- 49. Once operational, the proposed MRF will provide a framework to allow developers to contribute towards strategic compensation measures in a coordinated way through contributions to the fund. The MRF will also provide a mechanism for the delivery of strategic compensation measures, with appropriate input from regulators and SNCBs. This coordinated approach should enable ecological benefit to the national site networks (NSNs) to be maximised and delivered in a timely manner.
- 50. Within the LoSCM, the designation and / or extension of MPAs is the given strategic measure to compensate for benthic impacts to designated features within the NSN. This measure will be strategically led by Defra in consultation with JNCC and Natural England and it is therefore beyond the ability of the Applicant to deliver. Contribution to the strategic designation and/or extension of MPAs via the MRF is the Applicant's preferred MEEB option should derogation be required.
- 51. In April 2025, Defra launched its consultation for the establishment of the MRF. The consultation sets out draft guidance on how the MRF is intended to operate including the application process. The Applicant provided a response to this consultation on 12 May 2025. The consultation document stated that final guidance on all aspects of the MRF is expected to be published in Autumn 2025 alongside the Statutory Instrument, and developers will be able to make applications to the MRF once it is live in Autumn 2025.

The Applicant is committed to further engagement with the Defra and the SNCBs as further detail on the delivery of the strategic designation of new MPAs and / or extending existing MPAs progresses.

Developing and Refining MEEB Options 3.4

3.4.1 Method

- 52. This roadmap sets out the current status of longlist and shortlisted MEEB options considered by the Applicant.
- 53. Viable MEEB options have been developed by taking into account: the latest advice / guidance on derogation matters; available supporting evidence; timescale of implementation and experience from other projects in the UK who have put forward 'without prejudice' MCAA Derogation cases and MEEB plans in support of an OWF DCO application and stakeholder feedback.

3.4.2 Longlist

- 54. The preliminary stages of the 'without prejudice' MEEB strategy involved the creation of a longlist of measures targeting the broadscale habitats within the Holderness Inshore MCZ. The aim of the longlist was to identify all possible MEEB options to offset potential impacts and pressures arising as a result of the Project. The longlist was based on the Project proposal, the understanding of the development of MEEB strategies for other OWF and stakeholder feedback from ETG 5 meetings (see Table 1-2). Presented in Table 3-1 is the longlist of measures and the associated stakeholder feedback which provides grounding for the shortlisted MEEB options for the Holderness Inshore MCZ.
- 55. To determine which longlist measures were going to be further developed and shortlisted, the Applicant originally proposed to utilise a rank and scoring methodology based on the European Commission (2018) guidance. However, after the second ETG 5 meeting (2 May 2024) it became apparent that a limited number of measures were deemed viable by both the Applicant and the SNCBs. The Applicant has therefore combined publicly available information with Project alone stakeholder feedback to develop a narrative-based rationale for shortlisting MEEB options. This is presented in Table 3-1.

3.4.3 Shortlist

- 56. Three measures, from the longlist, have been further considered as viable MEEB options relevant to the potential impacts from the Project to the protected features of the Holderness Inshore MCZ:
 - Restoration of linear features within Holderness Inshore MCZ;

- Habitat restoration oyster habitat restoration / creation; and
- Strategic delivery of designation of new MPAs and / or extension of existing MPAs.
- 57. Restoration of linear features was shortlisted as an option to deliver MEEB following feedback from Natural England during ETG 5 Meeting 2 on the 02 May 2024. Natural England stated they support the measure in-principle pending further investigation. The outcome of this further investigation is summarised in **Section 4.2**.
- 58. Following the investigation of the feasibility of restoration of linear features, the Applicant revisited the shortlisting process, and habitat restoration in the form of oyster bed habitat restoration / creation was prioritised on the basis of ecological viability and proven record of delivery. The Applicant has submitted a Benthic Compensation and MEEB Evidence Update note to Natural England via their DAS, which included further details on this measure, and sought advice from Natural England on applicability of strategic delivery of MPA extension and / or designation for the Project's potential adverse effect on Holderness Inshore MCZ (24 March 2025). A response was received from Natural England on 24 April 2025, further details are provided in **Table 1-2**. The outcome of further investigation into the shortlisted options is summarised in **Section 4.3**.
- 59. The recent release of the Defra WMS (Defra, 2025) on strategic compensation and the DESNZ Interim Guidance (DESNZ, 2025) clarifies that strategic delivery of new MPAs and / or extension of existing MPAs could deliver MEEB, to offset unavoidable impacts to the benthic features of MCZs.
- 60. The shortlisted options for MEEB are discussed in further detail in **Section 4.**

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Table 3-1 Longlist of Measures of Equivalent Environmental Benefit for Holderness Inshore MCZ

Measure	Delivery Mechanism	Summary	Rationale for Exclusion / Development
Removal of Pressures: Infrastructure	Project Alone	Removal of the pressures from existing oil and gas infrastructure, including pipelines, well heads, and rock protection. Typically, during the decommission procedure, this type of infrastructure would not be removed. However, the removal of the existing oil and gas infrastructure, may help reduce pressures and therefore maintain the designated features in 'favourable' condition.	During the second ETG 5 meeting (2 May 2024) Natural England associated with oil and gas infrastructure. However, OPRED proceed would involve offshore wind developers taking on lial environmental consequences, should technical failure occur d concluded that the removal of disused oil and gas infrastruct Applicant. Therefore, this measure was excluded as an option to deliver b
Spurn Head Defence	Project Alone	Spurn Head was sold by the Ministry of Defence (MoD) to Yorkshire Wildlife Trust (YWT) in 1961 due to the costs associated with coastal defence. It is predicted that the Spurn peninsula will split in the future, leaving Spurn Point as an island. The subtidal region of Spurn Head is a designated feature of geological interest within the Holderness Inshore MCZ. It was proposed that it may be possible to ensure conservation of this feature in the absence of traditional coastal defenses, whilst also working alongside YWT via the controlled degradation and eventual reformation of the reserve in the future.	Natural England noted in the second ETG 5 meeting (2 May 202 is not considered that the feature provides direct protection to plan for this site is to "allow natural coastal processes to geomorphological functions and viability". As such, this n Holderness Inshore MCZ.
Resolution of Data Gaps	Project Alone	Monitoring of the sites may allow for an increase in data confidence, and the further refinement of designated feature locations and condition. Currently no condition assessment has been undertaken for Holderness Inshore MCZ, and the site may therefore benefit for an increase in data richness with which to inform this assessment. It was noted that whilst a grab and drop-down video survey was undertaken in 2018, these have not been used to date.	During the second ETG 5 meeting (2 May 2024) Natural Englan it would need to have defined purpose in terms of enhancing p and above that which would be expected from regular site m Natural England stated that this measure would only be accep the surveys would be applied to secure specific compensation would not contribute to addressing potential compensatory SNCBs. As a measure alone, this option has not been consider Therefore, due to a lack of support, resolution of data gaps has b benthic MEEB to the Holderness Inshore MCZ.
Restoration of Linear Features	Project Alone	There are large areas of linear rock and clay features that have been cleared as part of oil and gas installation works within the Holderness Inshore MCZ. Restoration of the rock and clay features could be undertaken through the placement of hard compact material.	During the second ETG 5 meeting (2 May 2024) Natural Engli restoration of linear features (clay exposures) as MEEB within H for this measure would be determined by the extent to wh construction activities. The primary challenge associated with the delivery of this mea- deposition in areas where clay features have been damaged / has been suggested that rock material could be deposited baseline. As a result of the potential support for this measure, it was sh Inshore MCZ, further details of this are found in Section 4.2.

d advised they would support removal of pressures do not support this measure and caution that to ability for infrastucture in perpetuity, including for during removal. In view of OPRED's position, it was trure was not a feasible measure available to the

benthic MEEB in the Holderness Inshore MCZ.

24) that they would not support this measure as it o the subtidal glacial relic. The YWT management restore and maintain Spurn's natural dynamic neasure has been **excluded** as MEEB for the

nd advised that although this would be beneficial, protection of site features or achieve change over nanagement, in order for this to qualify as MEEB. pted if it was ensured that the data produced from on related to the Project. If this was not the case, it y requirements and would not be supported by ered suitable to progress further at this time.

been **excluded** at this stage as an option to deliver

gland advised they could potentially support the Holderness Inshore MCZ and noted that the scope hich the Project affects similar features during

asure is the identification of suitable material for / removed by historical construction activities. It to restore the bathymetric profile to a historic

hortlisted as a MEEB option for the Holderness

Measure	Delivery Mechanism	Summary	Rationale for Exclusion / Development
		The baseline geophysical characterisation of the Humber Gateway offshore wind farm export cable route identified several north-northwest to south-southeast orientated, narrow, very steep (near vertical) clay ridges, which stand between 1 and 3m above the surrounding seabed (Titan Environmental Surveys Limited, 2005). Post-construction monitoring notes that <i>"the export cable trenches have been constructed through these features, which are now</i> <i>truncated at each trench edge"</i> (Bibby HydroMap, 2016).	
Habitat Restoration	Project Alone, Collaborative	Restoration of a native oyster bed at a suitable scale to enable a self-sustaining reef feature within a suitable site in the southern North Sea. Restoration would be in collaboration with a specialist delivery partner in native oyster restoration and potentially in collaboration with other developments which have already had a similar measure consented.	There is recent precedent from the Sheringham and Dudgeon to an MCZ resulting from the potential placement of cable proteoyster beds, a different feature to the protected features existed demonstrated in Table 1-2 , there is support for this option from the ecological viability of this approach. As such, this measure has been shortlisted as an potential of Inshore MCZ, further details of this are found in Section 4.3 Here
Designation of new MPA or extension of an existing MPA	Strategic	Designation of new sites, or extension of existing sites has the potential to provide protection and enhancement to the same or similar designated features within the existing sites. However, it was noted that there is currently no project alone delivery mechanism for this, and it would likely require a strategic level approach.	Natural England stated in the second ETG 5 meeting (2 May 202 measure (i.e. jointly led by multiple developers). The recent guidance issued by DESNZ on strategic compensa this guidance refers to the term "compensation" or "comper mean both compensation under the Habitats Regulations an under the Marine and Coastal Access Act 2009". This stat measures listed under the LoSCM will be applicable both to c MEEB under the Marine and Coastal Access Act 2009. Contribution to the strategic designation and / or extension Estate's CIP Plan Level HRA (The Crown Estate, 2025). If delivered at a strategic level, this option would be exper requirements. New MPA designation has been shortlisted as a potential sho

Extension Projects (SEP&DEP) project for impacts tection being compensated for via provision of new xpected to be affected by the developments. As om Natural England and a good evidence base for

option to deliver benthic MEEB to the Holderness abitat Restoration.

024) that they would support this as a collaborative

ation measures (DESNZ, 2025) notes that "Where nsation measures", this should be understood to nd measures of equivalent environmental benefit itement has been interpreted to signify that the compensation under the Habitats Regulations and

of MPAs via the MRF is supported by The Crown

ected to sufficiently provide the Project's MEEB

ortlist measure.

Shortlisted Measures 4

4.1 Introduction

- 61. Following a period of consultation and evidence review, three possible MEEB options from the longlist were considered for further progression as MEEB by the Applicant. These were:
 - Restoration of linear features;
 - · Habitat restoration in the form of native oyster bed habitat; and
 - Designation of new MPAs and / or extending existing MPAs.
- 62. With reference to the Defra compensation hierarchy as outlined in their best practice guidance (Defra, 2021), (see Section 3.1) the first two options do not represent like-forlike MEEB for the impacted features of the Holderness Inshore MCZ. The restoration of linear features would be categorised as 'comparable ecological function same location' (step 3) while oyster bed habitat restoration would be as 'comparable ecological function different location' (step 4). The third option (designation of new MPAs and / or extending existing MPAs) may or may not represent a like-for-like measure, though this cannot be confirmed until the final candidate site (or sites) has been identified and associated protected features confirmed. Due to Natural England's withdrawal from the EPP (see Section 1.4), the Applicant had only received feedback on the restoration of linear features measure through the ETGs. The Applicant has addressed this engagement gap with the submission of an updated note (Benthic Compensation and MEEB Evidence Update, issued to Natural England on 24 March 2025) on the proposed MEEB options.
- The strategic option of designation of new MPAs and / or extending existing MPAs is being 63. considered by the Applicant following the publication of Interim Guidance from DESNZ (DESNZ, 2025) and the accompanying WMS from Defra (Defra, 2025). Contribution to the strategic designation and / or extension of MPAs via the MRF is supported by The Crown Estate's CIP Plan Level HRA (The Crown Estate, 2025) and is the Applicant's preferred option.
- 64. As the strategic designation of new MPAs and / or extending existing MPAs measure evolves, the Applicant is actively monitoring potential sites being considered by Defra. However, there remains uncertainty surrounding the function of the MRF, the site or sites to be extended or designated and the timescales for delivery. In the meantime, the Applicant will continue to develop it's 'without prejudice' MEEB plan which will include the Project alone / collaborative shortlisted options above, alongside strategic delivery of designation of new MPAs and / or extending existing MPAs. An initial summary of the ecological merit of this measure is presented in Section 4.4.

4.2 **Restoration of Linear Features**

4.2.1 Overview

- Natural England advised, during the second ETG 5 meeting (2 May 2024), that there are 65. large areas of linear rock and clay features that have been cleared as part of oil and gas infrastructure installation works. Restoration of their linear track through placement of hard compact material may qualify as feature restoration and therefore be supported as a MEEB. The baseline geophysical characterisation of the Humber Gateway OWF export cable route (Titan Environmental Surveys Limited, 2005) identified several northnorthwest to south-southeast orientated, narrow, very steep (near vertical) clay ridges, which stand between 1 and 3m above the surrounding seabed. Post-construction monitoring notes that "the export cable trenches have been constructed through these features, which are now truncated at each trench edge".
- 66. Based on advice from Natural England, the placement of hard compact material which replicates that previously lost as a result of other development projects has the potential to restore this feature and would therefore be supported as a MEEB option. The restoration of the linear features could return the site's bathymetry to its historical state and, by recreating sediment types lost, restore suitable ecological niche space.
- 67. The linear clay features present within the Holderness Inshore MCZ potentially qualify as 'peat and clay exposures'. The status of these as features of conservation importance (FOCI) signify that they are particularly threatened, rare, or declining marine features. This fragile habitat is rare within UK waters and, having formed due to the presence of former lakebed sediment, will not recover or regenerate following damage or loss. The habitat is characterised by common piddock Pholas dactylus and bristle worm Polydora *ciliata*, which can successfully bore due to the soft composite sediment. This activity creates structural complexity though piddock holes or other crevices, which are colonised by other animals to increase biodiversity within otherwise impoverished areas.

Measure of Success / Effectiveness 4.2.2

A primary challenge to delivery of this measure is identification of suitable material for 68. deposition in areas where clay features have been damaged/removed by historical construction activities. Rock material can be deposited to restore the bathymetric profile to a historic baseline. However, where present within the Holderness Inshore MCZ these features form near vertical 1 to 3m faces (Titan Environmental Surveys Limited, 2005). Deposition of rock material typically creates a shallow gradient to ensure long term structure stability. As such, this will not recreate a comparable gradient to that found naturally. In addition, the ecological value of the 'peat and clay exposure' features is not solely associated with large scale topography, but also from the fine scale complexity produced by organisms burrowing within the soft clays. Rock does not

support these burrowing species and so it is unlikely that it will be colonised by the same characterising species.

- 69. A key challenge in the delivery of this measure would relate to the potential need to create the "near vertical 1-3m faces" of similar clay material. It is anticipated that there would be considerable engineering challenges in constructing these. It is likely that achieving stability would require excavation of large foundation pits and use of concrete. There are serious environmental concerns over such activities, and it is unclear how this would not result in unacceptable impact levels. A further concern stems from uncertainty; the Applicant is not aware of this measure ever having been attempted before. As such, there is low confidence over the likely outcomes. It is probable that delivery would require a 'trial and error' approach, and there is a reasonable chance that it would not lead to a successful outcome.
- In view of the logistical and technical difficulties expected to be associated with 70. engineering and delivering this measure for larger scale topographical features, the potential for environmental damage caused during construction, and uncertainty over whether it could be delivered in a means that provides equivalent ecological function, or indeed successfully delivered at all, it is considered that there is excessive uncertainty regarding this measure.

4.2.3 Scale

- 71. Natural England have previously commented that the scope to which this measure can be applied will be determined by the extent to which the Project affects similar features. The Applicant is seeking clarification from Natural England as to whether this measure should be discounted if the DBD export route does not intersect any of these features within the Holderness Inshore MCZ. As per the outcome of the MCZA, the Project's Offshore Development Area does not cross any High Energy Circalittoral Rock (A4.1) and Moderate Energy Circalittoral Rock (A4.2) features. It is therefore anticipated that the Project will not impact on any "peat and clay exposure" habitat FOCI features.
- 72. Throughout consultation during ETG 5 meetings the SNCBs have emphasised that MEEB should demonstrate ecological merit in terms of site conservation objectives and ecological function of the feature that may be affected by the proposed works. Given the current evidence, the Applicant deems it extremely unlikely that what it could deliver would satisfy this requirement.

4.2.4 Site Selection

73. The distribution of these important clay features is not well understood. At present, there is no known map that details their distribution within the Holderness Inshore MCZ. The Humber Gateway Environmental Report (Bibby HydroMap, 2016) presents a map of feature distribution but only within the vicinity of their cable corridor; this will be useful to identify areas that have been impacted by cabling operations, however it will not detail the historic presence of this feature within the site or the impact that historic oil and gas infrastructure may have had on the feature.

- 74. The Applicant would need to conduct characterisation surveys within the MCZ to understand current extent and distribution of this feature as well as any evidence of anthropogenic activity causing an impact.
- 75. Following a characterisation survey to identify suitable areas for restoration, the Applicant would need to identify and consult with infrastructure owners and gain approval for rock dumping or placement of other materials or structures as deemed most appropriate to replicate the natural form and function of the naturally occurring linear features on their assets. Given the latest update from OPRED (2023) on the concerns around legal responsibility for decommissioning redundant oil and gas infrastructure, the Applicant also has concerns around the placement of additional material or structures on infrastructure which may later need to be decommissioned.

4.2.5 **Delivery Mechanism**

- 76. This measure has been outlined for delivery as a project alone MEEB. The restoration of linear features would be carried out by filling the gaps in the clay exposures with additional material or structures and would require a marine licence and a lease from The Crown Estate. In addition, formal agreements with other sea and seabed users, particularly oil and gas infrastructure, would also need to be secured.
- 77. Next Steps
- 78. Due to concern regarding the effectiveness, technical viability and scale of this option to meet the Project's MEEB requirements, this option is not being progressed any further at this time.

4.3 Habitat Restoration

4.3.1 Overview

- 79. If MEEB is required, oyster bed restoration could be progressed as a preferred project alone or collaboratively delivered MEEB option. However, should the MRF become available within the necessary timescales for the Applicant and be relied upon to discharge the Applicants' MEEB requirements, the Applicant may seek to make a contribution to the MRF in place of project alone or collaborative oyster bed restoration.
- 80. As native oyster has a historical presence within Southern North Sea, it is considered that habitat creation (in the right location) could deliver MEEB. A proven track record of successful oyster bed habitat creation programmes in the UK aligns with the Defra

guidance on compensatory measures and MEEB (Defra, 2021) which states that there should be "confidence in the measure being entirely effective".

- The Applicant notes the recent precedent set by the SEP & DEP which prepared an In-81. Principle MEEB Plan (Equinor, 2022) to account for potential impacts from the deployment of external cable protection within an area of designated Subtidal mixed sediment in the Cromer Shoal Chalk Beds (CSCB) MCZ. One of the options proposed is the planting of native oyster beds within CSCB MCZ. While the SoS acknowledged that this option is not like-for-like, it was recognised that restoring a historic feature would provide considerable ecological value by increasing biodiversity, providing nursery grounds for fish, and providing numerous ecosystem goods and services (Equinor, 2022).
- 82. Whilst this option may not provide an equivalent like-for-like benefit, it would provide comparable ecological function and looks to strengthen the national network of Annex I biogenic reef within the North Sea. Further information on the Applicant's preference for habitat restoration through the implementation of native oyster beds has been presented to Natural England in the Benthic Compensation and MEEB Evidence Update (Issued 24 March 2025). Feedback received from Natural England (see Table 1-2) states that there may be potential for comparable ecological function to be achieved by establishing a new oyster bed outside of the Holderness Inshore MCZ, dependent on scale, location and methods applied. While it is acknowledged that this option would be considered lower down against Defra's compensation hierarchy, both the Applicant and Natural England understand there to be potential in this option and as such, this measure will be considered further.
- 83. The Applicant considers this measure as suitable for progressing on the basis of historical presence of this feature within the wider southern North Sea, its ability to provide comparable ecological function, and because habitat restoration has been trialled and delivered in numerous UK locations.
- 84. A meeting was held between the Applicant and Blue Marine Foundation (BMF) on 25 February 2025. BMF does not currently have the capacity to support the delivery of this measure but is willing to provide valuable advisory services. Engagement between the Applicant and third parties with a demonstrable track record in delivering habitat restoration is ongoing and the Applicant will provide details as any collaboration progresses.

Project Relevance 4.3.2

Through the examination of available MEEB options (see **Table 3-1**), it is apparent that 85. one of the most effective ways to improve the Holderness Inshore MCZ condition is through increased biodiversity and improved habitat condition.

- 86. Native oyster Ostrea edulis beds were once plentiful along the coast but due to multiple stressors including overfishing, disease, extreme weather events, non-native species introduction and contaminants, oyster populations have declined. Oyster reefs are estimated to have dwindled by 85% globally (Beck et al., 2011), and they are classified as threatened and/or declining by the OSPAR Commission (OSPAR, 2009). A key factor for native oyster recruitment is settlement sites comprised of hard sandy mud, muddy shell gravel or rock as these surfaces are stable for larvae to attach. The Holderness Inshore MCZ contains patches of subtidal coarse sediment, and subtidal mixed sediment which are potentially suitable for restoration of native oyster beds.
- 87. Given the historical presence of native oyster in this area of the North Sea it is considered that habitat creation will serve as a restoration. In addition, habitat creation through development of oyster beds has an additional key advantage over measures such as restoration of peat and clay exposures: the range of examples of this measure being successfully delivered elsewhere. Defra guidance on selection of compensatory measures or MEEB (Defra, 2021) states that options providing "confidence in the measure being entirely effective" should be considered. In this case, the proven track record of successful oyster bed habitat creation programmes increases confidence that if pursued, this measure would be successful and deliver tangible benefit to the UK MPA network.
- 88. Although recent surveys have not identified the presence of oyster within the Holderness Inshore MCZ, native oyster beds were once abundant in the North Sea. Historical native oyster bed distributions were thought to cover an area which is now designated as part of the Holderness Inshore MCZ (Olsen, 1889).
- 89. If MEEB is required by the SoS, the establishment of oyster bed either inside of the Holderness Inshore MCZ, or at another location could offer long term enhanced ecological function to habitat being lost within the NSN as a result of the Project. The Applicant notes that oyster bed restoration outside of the Holderness Inshore MCZ is less preferable when considering the Defra compensation hierarchy (Defra, 2021). However, there may be viable opportunities for oyster planting that offer greater scale of measure and thus increased spatial and temporal net benefits outside of the Holderness Inshore MCZ.
- 90. The Holderness Inshore MCZ contains areas of subtidal coarse sediment, and subtidal mixed sediment, which would therefore be suitable for oyster settlement. While this would provide favourable conditions for oyster bed planting, wider environmental conditions should also be assessed to ensure any planting is effective.
- A site selection exercise will be undertaken to ascertain the best location for the 91. establishment of an oyster bed, though the Applicant is mindful of Natural England's position that they are not likely to support this measure inside of the Holderness Inshore MCZ.

4.3.3 Scale

- 92. The WCS long term habitat loss / alteration within the Holderness Inshore MCZ from external cable protection is anticipated to be 29,700m² which equates to <0.01% of the MCZ area (see Section 1.2). As a minimum, the Applicant would seek to deliver an equivalent MEEB quantum. However, to successfully deliver this option, it should be implemented at a sufficient scale that ensures longevity and ecological success. As such, oysters should be planted with coverage substantial enough to be considered to be an oyster bed.
- 93. OSPAR (2009) define an oyster bed as:
- 94. "Ostrea edulis occurring at densities of five or more per m² on shallow mostly sheltered sediments (typically 0-10m depth, but occasionally down to 30m). There may be considerable quantities of dead oyster shell (cultch) making up a substantial portion of the substratum".
- 95. In addition to these criteria of density and presence of cultch, it is essential that any bed that is created is of sufficient spatial extent to provide confidence of long-term viability. University Marine Biological Station Millport estimate that a minimum of 50,000 individuals is needed to maintain the genetic heterogeneity required by a population to adapt to environmental change (University Marine Biological Station Millport, 2007). However, it is also noted that increased size has benefits in terms of habitat complexity and associated long-term ovster survival, growth, reproduction and reef accretion.
- 96. In addition to pursuing this measure on a project alone basis, the Applicant has engaged with another developer regarding collaboration on delivery of oyster bed habitat creation/restoration. The Applicant will seek to ensure that where implemented any collaborative oyster bed restoration project is delivered at a scale sufficient to deliver MEEB for both project's requirements.
- The Applicant is also considering a project alone delivery scenario should a collaborative 97. measure not be suitable. Under this scenario, the Applicant would seek support from a specialist organisation with a proven track record in delivering marine habitat restoration as outlined in Section 4.3.1.

Site Selection 4.3.4

98. It is likely that a larger oyster restoration scheme will have a higher success rate if the habitat is able to become established at scale. To maximise the likelihood that any oyster bed that is created is self-sustaining with long term viability, it is proposed that this measure is delivered in partnership with other oyster bed habitat creation plans under development in the English east coast region. Therefore, it may not be possible to deliver like-for-like MEEB within the Holderness Inshore MCZ. The identification of a site with sufficient scale, and the correct ecological conditions would be developed alongside a specialist partner either on a Project alone, or collaborative basis with another developer.

99. Whether delivered by the Applicant alone or in collaboration, the site selection is expected to include robust consideration of the key biotic and abiotic factors that influence native oyster settlement and functioning.

4.3.5 **Delivery Mechanism**

- 100. If MEEB progresses on a collaborative basis, a commercial agreement (see **Section 3.2**) will be progressed which will define the scale of the measure, apportionment of benefits, monitoring and maintenance responsibilities, funding etc. There are numerous benefits of collaborating with another developer to deliver MEEB which include an ability to deliver an oyster restoration scheme at a larger scale, and enhanced delivery timescales associated with working alongside another developer in a more advanced planning stage than the Applicant.
- Should collaborative delivery not progress, the Applicant will seek to deliver this 101. measure on a project alone basis with support from a specialist delivery partner with proven experience of establishing native oyster beds in the UK. If this is the preferred MEEB option for the Project, the Applicant will seek to have an in-principle agreement with a suitable specialist in place before the submission of the ES and associated DCO application. This approach will ensure that the Applicant has access to the specialist knowledge and resources that are required to successfully deliver this measure.
- 102. The Applicant will continue to engage with potential collaborators regarding oyster bed and habitat restoration as this measure is further progressed.

4.3.6 Monitoring and Adaptive Management

- Monitoring requirements will be in-line with the established and previously consented 103. methods and standards including the European Native Oyster Habitat Restoration Monitoring Handbook (zu Ermgassen, et al., 2021).
- Criteria for success will be based on several metrics and are likely to include oyster 104. survival, oyster density, environmental conditions (including temperature) and localised biodiversity within the oyster bed and surrounding areas.
- 105. If this measure is not a success and does not deliver as anticipated, consideration would be given to remedial options through adaptive management.

4.3.7 Next Steps

- 106. Alongside seeking to progress collaborative options, the Applicant will continue to engage with potential delivery partners with a proven track record of delivering functioning native oyster beds.
- 107. In addition to the engagement with potential collaborative and delivery partners the Project will continue to develop a supporting case which includes the creation of a draft implementation and management plan with robust site selection, details of scale and details of the required monitoring and adaptive management plans.

Designation of a New MPA and / or Extension of Existing 4.4 **MPAs**

4.4.1 Overview

- 108. In addition to the Project alone and collaborative measures outlined in Sections 4.2 and **4.3**, the Applicant has appraised MEEB options to be delivered strategically through the MRF should it become operational within a suitable timescale. The measure shortlisted by the Applicant is designation of a new MPA and / or extension of an existing MPA. This measure, which is included within the LoSCM, will look to extend areas of protected habitat or designate a new MPA to compensate for potential impacts that the offshore wind projects in the North Sea may have on broadscale habitat features across multiple MPAs, including those within the Holderness Inshore MCZ. This approach delivers compensation via addressing either "the same impact in the same location" or "the same ecological function in a different location" levels of the Defra Compensation Hierarchy (Defra, 2021).
- 109. This measure involves the designation of a previously unprotected area and therefore must be delivered at a strategic level by Defra in conjunction with SNCBs including Natural England and JNCC. The designation of a new MPA and / or extension of an

existing MPA will require formal consultation and legal status and therefore cannot be delivered by either the Project alone or by working with other industry partners. As a result, the implementation of this measure is dependent on the development of strategic measures from government industry bodies and not the Applicant.

Primary legislation through the Energy Act 2023 is in place to allow offshore wind 110. developers access to strategic compensation (and MEEB) measures, however this will need to be supported by secondary legislation to facilitate the creation and management of the MRF which is still forthcoming. It is intended that OWF developers will be able to contribute to these strategic measures via contributions to the MRF. Further information on the legal status of strategic measures and detail on DESNZ's Interim Guidance, which confirmed that the Project would be eligible to contribute to strategic compensation, is presented in Section 3.3.

Measure of Success / Effectiveness 4.4.2

- 111. This MEEB will be delivered strategically by Defra, ensuring that the designation of new MPAs and / or extending existing MPAs will be effective.
- 112. Interim Guidance from DESNZ (DESNZ, 2025) states that the MRF operator (MRFO) will be required to provide information regarding the compensation (and MEEB) and ongoing management and monitoring to eligible projects to feed into Implementation and Monitoring Plans post-consent. It is recognised that the detailed information usually expected by DESNZ SoS may not be fully available until the Government's MPA designation/extension programme is complete. The WMS (Defra, 2025) therefore commits to the production of high-level Implementation and Monitoring Plans (IMPs), which would be obtained from Defra by the Applicant and provided to the DESNZ SoS before works which give rise to the relevant impact can commence. These will contain information on how the effectiveness of the MPA designation would be maintained in terms of enforcement and adaptive management.
- SNCBs have emphasised during ETG 5 meetings that MEEB options are preferred where 113. there is ecological merit in terms of site conservation objectives and ecological function of the feature that may be affected by the proposed works. It is expected that this measure satisfies this requirement.

4.4.3 Scale

The scale of MEEB delivered through designation of new MPAs and / or extending existing 114. MPAs will be determined by Defra. The Applicant has provided anticipated WCS impacts to DESNZ via a call to industry which will feed into the development process being undertaken by Defra. This will help ensure that strategic MEEB will sufficiently account for impacts of those projects which are anticipated to come forward to use this measure. Any updates to Project impacts will be provided to DESNZ and Defra so that the

necessary compensation quantum for the Project reflects the amount of habitat impacted.

The Project would require 29,700m² of like-for-like habitat to be designated to offset 115. impacts against long-term habitat loss. Should like-for-like habitat not be available within the newly designated MPA, it is anticipated that ecologically analogous habitat providing similar structure and function to support communities will be designated. It is expected that developers' contributions to the MRF will be scaled according to confidence in the measure's success, which is likely to be related to scale of the measure in relation to impacts. Further details are awaited regarding the functioning of the MRF which will be included within the Project's DCO application in due course.

4.4.4 Site Selection

The UK Government has committed to identifying suitable areas for extension or 116. designation to provide strategic compensation and MEEB for OWF developments. This process is ongoing, and detailed information on the location of MPAs to be designated is not yet available. Through direct engagement with Defra (6 February 2025), it is understood that Defra is expecting advice from Natural England and JNCC on site selection in Spring 2025. This will be followed by a consultation period taking stakeholder views into account on ecological, social and economic factors prior to public consultation which is planned for 2026. It is understood that following the selection of a final candidate site (or sites), the designation period will be approximately three years.

4.4.5 Delivery Mechanism

- The Applicant would contribute to the MRF to be able to rely on the designation of new 117. MPAs and / or extending existing MPAs as outlined in the LoSCM. As per the Interim Guidance from DESNZ (DESNZ, 2025), the Applicant will continue to engage with SNCBs, Defra, relevant regulators, local authorities (if applicable) and relevant stakeholders.
- 118. The Project's DCO application would also include a requirement to provide post-consent evidence of any agreements with Defra (as the MRFO) and evidence that the agreed contribution has been paid (or first in a series of instalments) prior to commencing any works which will give rise to impacts that would hinder conservation objectives at the Holderness Inshore MCZ. Defra will be producing a high-level IMP in advance of final MPA designations to assist developers in providing the necessary information to DESNZ SoS. The final IMP will be provided by Defra on the completion of the MPA designations and / or extension programme.

4.4.6 Monitoring and Adaptive Management

As per the Interim Guidance on the MRF (DESNZ, 2025): 119.

- "DESNZ Secretary of State will usually expect to see greater clarity and certainty 120. regarding the compensation and the ongoing management and monitoring before works which give rise to the adverse effect for which compensation is required can commence. When the MRF is operational, this information would normally be provided by the MRF Operator to the applicant for submission to the DESNZ Secretary of State as a full Implementation and Monitoring Plan."
- 121. "It is recognised that the detailed information usually expected by DESNZ Secretary of State may not be fully available until the Government's MPA designation/extension programme is complete. The WMS therefore commits to the production of high-level Implementation and Monitoring Plans, which should be obtained from Defra by the applicant and provided to the DESNZ Secretary of State before works which give rise to the adverse effect for which compensation is required can commence. These plans will contain the following information:
 - High level explanation as to how designation of an MPA will compensate for effects on each relevant habitat and, where possible, ratios used.
 - Implementation timetable and an explanation of the MPA designation process.
 - Information on current monitoring, long term management and reporting of MPAs, and any differences for MPAs designated for compensation purposes.
 - Information on how the effectiveness of the MPA designation would be maintained in terms of enforcement and adaptive management.
 - Commitment to providing an updated IMP as the designation process continues and • detail is resolved."
- 122. The DCO will indicate a requirement to provide a full IMP (or analogous document suitable for MCAA derogation cases) as soon as this is available from Defra on completion of the MPA designation and / or extension programme.

4.4.7 **Next Steps**

- With the publication of Defra's WMS (Defra, 2025) on strategic compensation (and 123. MEEB) and the Interim Guidance from DESNZ (DESNZ, 2025), the Applicant is confident that MEEB for the Project can be delivered strategically.
- 124. The next steps for the Applicant are to:
 - Continue to engage with relevant stakeholders as the delivery of strategic MEEB options are developed and secondary legislation is put in place;
 - Keep up to date with progress on the MRF and continue to contribute to delivery groups as relevant; and
 - Engage with DESNZ and Defra as the Project progresses.

5 Conclusion

- 125. The process for developing MEEB for the potential Project impacts to the sedimentary broadscale habitat features of the Holderness Inshore MCZ has led the Applicant to shortlist the following options which have potential to provide suitable and deliverable MEEB:
 - Habitat restoration in the form of native oyster bed habitat (as a project alone and / or collaborative option).
 - Designation and / or extension of existing an MPA (strategic delivery via the MRF).
- 126. As outlined in **Section 4.2**, the Applicant considers that there is too much ecological, logistical and legal uncertainty around the delivery of the restoration of linear features measure for it to be considered for further development by the Applicant.
- 127. **Table 5-1** presents a summary of the current Project status regarding the delivery of the two favoured MEEB options within the context of Natural England's checklist for compensation measures. The Applicant will continue to update this table as details surrounding both shortlisted measures emerge, and the Project progresses through the DCO application process.

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Natural England Compensation Checklist		Habitat Restoration	Designation and / or extension of existing an MPA
а	What, where, when: clear and detailed statements regarding the location and design of the proposal.	Restoration of a native oyster bed at a suitable scale to enable a self-sustaining reef within a suitable site in the Southern North Sea. It is intended that the location and scale of a site, or site options will be detailed in the DCO submission. Though this option may not provide an equivalent like-for-like benefit, it would provide comparable ecological function.	
		Oyster restoration would be undertaken with the support of a specialist in native oyster restoration and potentially in collaboration with another developer if possible.	Designation of new MPAs and/or extension of existing Noroviding equivalent ecological function to the sedimentary
		The timescales for the delivery of this MEEB option are unclear at present though it is expected a higher degree of clarity on the timescales will emerge as discussions with potential collaborators progress. The Applicant anticipates that MEEB will be implemented ahead of potential impacts for the Project.	The Applicant will access this measure through a contribution
		Should the Applicant progress with a collaborative option for this measure, delivery may be accelerated.	
b	Why and how: ecological evidence to demonstrate compensation for the impacted site feature is deliverable in the proposed locations.	One of the most effective ways to offset long-term impacts to sedimentary broadscale habitats is to improve conditions in the NSN. This can be achieved through biodiversity enhancement. Oyster bed creation / restoration at an appropriate location in the North Sea would provide considerable ecological value by increasing biodiversity, providing nursery grounds for fish, and providing numerous ecosystem goods and services. Whether delivered on a Project alone or collaborative basis, the Applicant would implement this option with support from a specialist with experience in delivering oyster bed creation projects. The MEEB would involve the planting of oysters in a suitable location where environmental conditions would be conducive to a thriving,	Areas of sediment features outside of MPAs do not receive the the Holderness Inshore MCZ. By extending or designating ne sedimentary features, the legal protections will encompass sedimentary features impacted by Project infrastructure we like, or analogous habitat. It is understood that the identification of candidate extension to ensure that the overall coherence of the MPA network advice from Natural England and the JNCC to inform this ide Although this is a strategic compensation measure, the Apple
		self-sustaining population. There are various methods that have been applied when undertaking oyster restoration, from the introduction of oyster 'hotels', the laying of cultch accompanied by a later introduction of spat, to introducing structures to the seabed pre-colonised by young oysters.	required. This approach is supported by central government and SN (Defra, 2025) and Interim Guidance on strategic compen 2025).
С	For measures at sea, demonstrate that measures have been secured e.g. agreements with other sea or seabed users.	The Applicant will be engaging with The Crown Estate over the coming months to determine lease requirements for this measure. Should this measure proceed on a Project alone basis, the Applicant will also engage with the MMO regarding MEEB design and the securing of a marine licence. Additionally, the Applicant will seek a site within the boundaries of an existing MPA wherever possible so that restrictions on seabed activity required to maintain the MEEB option are in line with the general management of the designated site.	As it stands, the process of delivering MPA designation or ex in turn making them responsible for obtaining relevant perm users. Details of the site extension process are currently un consultation process with other sea users will be conduc responsible for the final designation process and will under

Table 5-1 Natural England Compensation Check List for shortlisted measures to deliver MEEB to the Holderness Inshore MCZ

MPAs with suitable North Sea habitat / features being impacted by the Project elivered strategically by Defra as MRFO. ion to the MRF.

he same legal protection as those within ew MPAs to cover currently unprotected s the new features. This will ensure any vill be effectively replaced with like-for-

on or new MPA areas will be led by Defra is maintained, and that Defra will use entification.

licant would be willing to assist with site phase consultation alongside Defra if

NCBs alike as outlined in Defra's WMS nsation delivered via the MRF (DESNZ,

extensions will be led by Defra as MRFO, missions and engaging with other marine nconfirmed, but it is assumed that a full cted prior to designation. JNCC will be rpin Defra's delivery work.

Natural England Compensation Checklist		Habitat Restoration	Designation and / or extension of existing an MPA
		Should the Project be delivered collaboratively with another offshore wind developer, a Memorandum of Understanding (MoU) (or similar commercial agreement) will be sought and evidenced as appropriate at the DCO submission stage. This will ensure the mutual understanding of obligations, apportionment of MEEB quantum and benefits, and monitoring requirements as well as funding details.	
		Engagement between the Applicant and a specialist advisor for matters related to oyster bed restoration will also be secured via a commercial agreement.	
d	Policy/legislative mechanism for delivering the compensation (where needed).	A relevant marine license will need to be obtained when site/s of restoration are selected.	The Energy Act (2023), provides the legislative basis for strategic compensation (and MEEB) measures, provided the any impacts of development through the application of centralised government are working together to develop the creation and management of the MRF. In the meantime, D Guidance from DESNZ (DESNZ, 2025) have been published Strategic compensation measures for offshore wind acting Guidance - GOV.UK). These publications include an outline LoSCM. The Interim Guidance outlines the MRF which who measures listed in the LoSCM (including designation of new Defra's WMS confirms that Defra will be producing high-leve in advance of final MPA designations to assist developers in DESNZ SoS, with final updated plans being provided once defined to the state of the s
е	Agreed DCO/Deemed Marine License (dML) conditions.	The Applicant will secure the relevant conditions within the DCO / dML.	The Applicant will secure the relevant conditions within the access strategic compensation measures through cont Applicant will review the Interim Guidance on the MRF (DES consultation for the establishment of the MRF in Autumn 20 producing a draft DCO, which will be submitted in support of
f	Clear aims and objectives of the compensation.	 The creation of additional oyster bed reef aims to: Provide MEEB for potential impacts of the Project from the deployment of external cable protection within areas of sedimentary features in the Holderness Inshore MCZ The objectives are: To use native oyster restoration to provide comparable ecological function to the impacted sedimentary features within the Holderness Inshore MCZ by strengthening the national network of Annex I biogenic reefs. 	 The designation of a new MPA and /or extension of an existin Offset unavoidable impacts of the Project of decommissioning to sedimentary features alread Inshore MCZ. The objectives are: To provide like-for-like or analogous ecological for features through the designation of a new MPA and of the national network of Subtidal coarse sediment.
g	Mechanism for further commitments if the original compensation objectives are not met – i.e., adaptive management.	The Applicant is seeking to collaborate with another developer for the delivery of this measure. Should this collaboration progress, the Applicant and the third-party developer will develop agreements between the parties on obligations, and commitments to further commitments should MEEB objectives not be met. Should this measure be progressed on a Project alone basis, commitments will be defined by the Applicant.	Due to the nature of this measure as a strategic level MEEB responsibility for the strategic compensation measur monitoring and adaptive management.

OWF developers to be able to adopt ey have exhausted all options to mitigate f the mitigation hierarchy. Currently, he secondary legislation to facilitate the Defra's WMS (Defra, 2025) and Interim d (see <u>Written Ministerial Statement</u> and tivities: Marine Recovery Fund Interim he of the measures currently within the hen operational, will be used to deliver ew MPAs and / or extending MPAs), and el Implementation and Monitoring Plans in providing the necessary information to designation has taken place.

e DCO / dML to ensure the Project can tributions provided to the MRF. The SNZ, 2025) and the outcomes of Defra's 025, and any further statements prior to of the DCO application.

ng MPA aims to:

during construction, operation and ady designated within the Holderness

function to the impacted sedimentary or extension of an MPA by strengthening nt, Subtidal sand, and Subtidal mixed

B option, Defra as the MRFO has overall re, including delivery, maintenance,

Natural England Compensation Checklist		Habitat Restoration	Designation and / or extension of existing an MPA
		The Applicant will commit to developing a MEEB IMP post-consent which will outline the Applicants' commitments to this measure. Details will also be provided in MEEB documentation at DCO submission, at a point where a greater number of details surrounding monitoring and adaptive management commitments can be made. The MEEB IMP will be developed in consultation with key SNCBs.	
h	Clear governance proposals for the post-consent phase – Natural England do not consider simply proposing a steering group is sufficient.	Details will emerge as the Project progresses but cannot be commented on in more detail at this early stage.	Due to the nature of this measure as a strategic level MEEB responsibility for the strategic compensation measur monitoring and adaptive management. The Applicant assur be split between the relevant government bodies who are management.
i	Ensure development of compensatory measures is open and transparent as a matter of public interest, including how information on the compensation would be publicly available.	The Applicant will ensure that a comprehensive MEEB delivery plan is included within the DCO application documentation which will be made public as part of the PINS examination process. The Applicant will also continue to engage with SNCBs and public bodies through the EPP and through statutory consultation at the Project progresses.	Due to the nature of this measure as a strategic level ME control of the Applicant. It is expected that a public consult designation process.
j	Timescales for implementation especially where compensation is part of a strategic project, including how timescales relate to the ecological impacts from the development.	The timescales for the delivery of this MEEB option are unclear at present though it is expected a higher degree of clarity on the timescales will emerge as discussions with potential collaborators progress. The Applicant anticipates that MEEB will be implemented ahead of potential impacts for the Project.	As stated in DESNZ's guidance on strategic compensation ("Applicants will be required to pay into the MRF to accele compensation measure. The DCO should also include a evidence that the agreed contribution has been paid, and Implementation and Monitoring Plan, prior to commencing adverse effect for which compensation is required." Ideally, MEEB will be implemented prior to any impact Holderness Inshore MCZ to prevent the accrual of any 'impa- are beyond the control of the Applicant for this measure measure not be in place ahead of impacts occurring within to a larger contribution to the MRF would be appropriate bu- remain unknown at present. Defra will lead a consultation period on this MEEB option ta ecological, social and economic factors prior to public cons- anticipated that following the selection of a final candidate s be approximately three years.
k	Commitments to ongoing monitoring of measure performance against specified success criteria.	Commitments to ongoing monitoring will be agreed with SNCBs should this measure be required. An outline MEEB IMP will be developed for submission with the DCO application.	Due to the nature of this measure as a strategic level M monitoring requirements and specified success criteria wil and other SNCBs. The Applicant's commitment to contributi monitoring.

B option, Defra as the MRFO has overall re, including delivery, maintenance, mes that post-consent governance will re responsible for site designation and

EEB option, this component is beyond tation will be carried out during the site

(DESNZ, 2025):

ess MPA designations/extensions as a requirement to provide post-consent d a requirement to provide a high-level ng any works which will give rise to the

ts arising from the Project within the act debt'. However, delivery timescales due to its strategic nature. Should the the MCZ, the MRFO may determine that ut details on payment, scale and ratio

aking stakeholder views into account on sultation which is planned for 2026. It is site (or sites), the designation period will

1EEB option, commitments to ongoing Il be established and managed by Defra ing towards the MRF will enable ongoing

Natural England Compensation Checklist		Habitat Restoration	Designation and / or extension of existing an MPA
ι	Proposals for ongoing 'sign off' procedure for implementing compensation measures throughout the lifetime of the project, including implementing feedback loops from monitoring.	Proposals for ongoing 'sign off' procedure would be agreed in consultation with SNCBs using precedents set by projects where this measure has been previously consented. Actions needed and monitoring thresholds throughout the lifetime of this measure will be detailed in the MEEB IMP. A schedule for review and reporting will also be included within this document.	 As per the strategic compensation measures for offshore Interim Guidance (DESNZ, 2025): "When the MRF is operational, this information [monitoring provided by the MRF Operator to the applicant for submission full Implementation and Monitoring Plan. It is recognised that the detailed information usually expected be fully available until the Government's MPA designate. It is recognised that the detailed information of high-level which should be obtained from Defra by the applicant and public before works which give rise to the adverse effect for commence. These plans will contain the following information of an M relevant habitat and, where possible, ratios used. Implementation on current monitoring, long term managed differences for MPAs designated for compensation Information on how the effectiveness of the MPA designation of an Information on how the effectiveness of the MPA designation of an PA relevant to providing an updated IMP as the designated for compensation
m	Continued annual management of the compensation area including to ensure other factors are not hindering the success of the compensation e.g. changes in habitat, increased disturbance as a result of subsequent plans/projects.	The site would be selected to ensure that biotic and abiotic factors influencing oyster bed establishment are optimal for bed development. The Applicant would seek to deploy within an existing MPA if possible, though environmental site conditions are considered to be the priority consideration for ensuring ecological success and long- term feasibility. A routine monitoring programme will be implemented once the chosen MEEB is delivered. This will look to assess signs of site disturbance as well as habitat and environmental alterations. An indicative monitoring programme will be provided in the Applicant's DCO application documentation once plans are more progressed and will be provided in the MEEB IMP post-consent.	Due to the nature of this measure as a strategic MEEB optio new MPAs and / or MPA extensions will be managed by the r be enabled by the Applicant's commitment to contributing t between the Project and Defra as the MRFO. It should be noted that Defra has committed to delivering su designation as strategic MEEB for benthic environmental im developments in the UK. This commitment has been outline

wind activities: Marine Recovery Fund

g and management] would normally be ion to the DESNZ Secretary of State as a

ed by DESNZ Secretary of State may not tion/extension program is complete. I Implementation and Monitoring Plans, provided to the DESNZ Secretary of State which compensation is required can tion:

MPA will compensate for effects on each

ne MPA designation process.

agement and reporting of MPAs, and any purposes.

esignation would be maintained in terms

signation process continues and details

on, continued annual management of relevant government bodies. This will towards the MRF and any agreements

ufficient MPA extension and / or npacts from planned offshore wind ed in the WMS (Defra, 2025).

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List of Acronyms

Acronym	Definition
BESS	British Energy Security Strategy
BMF	Blue Marine Foundation
BSH	Broadscale Sediment Habitats
CA	Competent Authority
CBRA	Cable Burial Risk Assessment
CIP	Capacity Increase Programme
CSCB	Cromer Shoal Chalk Beds
DAS	Discretionary Advice Service
DBA	Dogger Bank A
DBB	Dogger Bank B
DBC	Dogger Bank C
DBD	Dogger Bank D
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security & Net Zero
dML	deemed Marine License
EIA	Environmental Impact Assessment
EPP	Evidence Plan Process
ES	Environmental Statement
ETG	Expert Topic Group
FOCI	Features of Conservation Importance
GW	Gigawatts
HDD	Horizontal Directional Drilling

Acronym	Definition
HRA	Habitat Regulations Assessment
IFCA	Inshore Fisheries and Conservation Author
IMP	Implementation and Monitoring Plan
JNCC	Joint Nature Conservation Committee
LoSCM	Library of Strategic Compensation Measu
MCAA	Marine and Coastal Access Act
MCZ	Marine Conservation Zone
MCZA	Marine Conservation Zone Assessment
MEEB	Measure of Equivalent Environmental Ber
MHWM	Mean High-Water Mark
ММО	Marine Management Organisation
MoD	Ministry of Defence
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MRF	Marine Recovery Fund
MRFO	Marine Recovery Fund Operator
MW	Megawatts
NGO	Nongovernmental Organisation
NM	Nautical mile
NSN	National Site Network
NSIP	Nationally Significant Infrastructure Proje
Offshore ECC	Offshore Export Cable Corridor
OPRED	Offshore Petroleum Regulator for Environ
OWEIP	Offshore Wind Environmental Improveme

orities
Ires
nefit
ect
ment and Decommissioning
ent Package

Acronym	Definition
OWF	Offshore Wind Farm
OWIC	Offshore Wind Industry Council
PEIR	Preliminary Environmental Impact Report
PINS	Planning Inspectorate
SEP & DEP	Sheringham and Dudgeon Extension Projects
SNCB	Statutory Nature Conservation Body
SoS	Secretary of State
WCS	Worst- Case Scenario
WMS	Written Ministerial Statement
YWT	Yorkshire Wildlife Trust

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