



FLOTATION ENERGY



vårgrønn

MPA Assessment

Measures of Equivalent Environmental
Benefit and Implementation Strategy

Version Number	Reason for Issue / Major Changes	Date of Change
A01	Issued for use	19/12/2024
R02	Major revisions	17/12/2024
R01	First draft	24/11/2024

Document Code:	CEN001-FLO-CON-ENV-RPT-0082	
Contractor Document Number:	NA	
Version Number:	A01	
Date:	19/12/2024	
Prepared by:	DM	
Checked by:	JS	
Approved by:	RW	

Table of Contents

Abbreviations	3
Glossary	5
Executive Summary	11
1 Introduction	12
1.1 Summary of the derogation case.....	12
1.2 Legislation.....	12
1.3 Guidance	13
1.4 Stakeholder engagement	13
2 Establishing the Level of Impact.....	15
2.1 Conservation objectives	15
2.2 Level and timescale of impact	16
2.3 Demonstrate the avoid reduce mitigate hierarchy.....	20
3 Measures of Equivalent Environmental Benefit	21
3.1 Proposal 1 – Strategic compensation.....	21
3.1.1 Details.....	21
3.1.2 Implementation	22
3.1.3 Monitoring.....	22
3.2 Proposal 2 – Removal of fishing pressure	22
3.2.1 Details.....	23
3.2.2 Implementation	30
3.2.3 Monitoring.....	31
3.3 Proposal 3 - Debris removal.....	31
3.3.1 Details.....	32
3.3.2 Implementation	35
3.3.3 Monitoring.....	36
3.4 Proposal 4 – designation of other sites.....	36
3.4.1 Details.....	36
3.4.2 Implementation	36
3.4.3 Monitoring.....	36
3.5 Adaptive management	37
4 Conclusions	38
5 References.....	39

Abbreviations

ABBREVIATION	DEFINITION
AC	Alternating Current
AEOSI	Adverse Effect on Site Integrity
AIS	Automatic Identification System
CES	Crown Estate Scotland
DC	Direct Current
EEA	European Economic Area
EGMF	East of Gannet and Montrose Fields
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EICB	Export/Import Cable Bundle
EICC	Export/Import Cable Corridor
HRA	Habitats Regulations Appraisal
HVAC	High Voltage Alternating Current
IAC	Inter-Array Cables
INTOG	Innovation and Targeted Oil and Gas
JEAP	Joint Environmental Accelerator Programme
JNCC	Joint Nature Conservation Committee
km	Kilometre
MD-LOT	Marine Directorate Licensing Operations Team
MEEB	Measures of Equivalent Environmental Benefit
MHWS	Mean High water spring
MLA	Marine Licence Applications
MPA	Marine Protected Area
MRF	Marine Recovery Fund
MW	Megawatts
ncMPA	Nature Conservation MPA
NFFO	National Federation of Fishermen's Organisations
OSCPs	Offshore Substation Converter Platforms
RLB	Red Line Boundary

ABBREVIATION	DEFINITION
SAC	Special Areas of Conservation
SFF	Scottish Fishermen's Federation
SMEEF	Scottish Marine Environmental Enhancement Fund
SNCB	Statutory Nature Conservation Bodies
SPA	Special Protection Areas
VMS	Vessel Monitoring System
WTG	Wind Turbine Generators

Glossary

TERM	DEFINITION
2023 Scoping Opinion	Scoping Opinion received in June 2023, superseded by the 2024 Scoping Opinion.
2023 Scoping Report	Environmental Impact Assessment (EIA) Scoping Report submitted in 2023, superseded by the 2024 Scoping Report.
2024 Scoping Opinion	Scoping Opinion received in September 2024, superseding the 2023 Scoping Opinion.
2024 Scoping Report	EIA Scoping Report submitted in April 2024, superseding the 2023 Scoping Report.
Area of Opportunity	The area in which the limits of electricity transmission via High Voltage Alternating Current (HVAC) cables can reach oil and gas assets for decarbonisation. This area is based on assets within a 100 kilometre (km) radius of the Array Area.
Array Area	The area within which the Wind Turbine Generators (WTGs), floating substructures, moorings and anchors, Offshore Substation Converter Platforms (OSCPs) and Inter-Array Cables (IAC) will be present.
Cenos Offshore Windfarm ('the Project')	'The Project' is the term used to describe Cenos Offshore Windfarm. The Project is a floating offshore windfarm located in the North Sea, with a generating capacity of up to 1,350 Megawatts (MW). The Project which defines the Red Line Boundary (RLB) for the Section 36 Consent and Marine Licence Applications (MLA), includes all offshore components seaward of Mean High Water Springs (MHWS) (WTGs, OSCP, cables, floating substructures moorings and anchors and all other associated infrastructure). The Project is the focus of this Environmental Impact Assessment Report (EIAR).
Cenos Offshore Windfarm Ltd. (The Applicant)	The Applicant for the Section 36 Consent and associated marine licences.

TERM	DEFINITION
Cumulative Assessment	The consideration of potential impacts that could occur cumulatively with other relevant projects, plans, and activities that could result in a cumulative effect on receptors.
Developer	Cenos Offshore Windfarm Ltd., a Joint Venture between Flotation Energy and Vårgrønn As (Vårgrønn).
Environmental Impact Assessment (EIA)	The statutory process of evaluating the likely significant environmental effects of a proposed project or development. Assessment of the potential impact of the proposed Project on the physical, biological and human environment during construction, operation and maintenance and decommissioning.
Environmental Impact Assessment Regulations	This term is used to refer to the Environmental Impact Assessment Regulations which are of relevance to the Project. This includes the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended); and the Marine Works (Environmental Impact Assessment) Regulations 2007.
Environmental Impact Assessment Report	A report documenting the findings of the EIA for the Project in accordance with relevant EIA Regulations.
Export/Import Cable	High voltage cable used to export/import power between the OSCPs and Landfall.
Export/Import Cable Bundle (EICB)	Comprising two Export / Import Cables and one fibre-optic cable bundled in a single trench.
Export/Import Cable Corridor (EICC)	The area within which the Export/Import Cable Route will be planned and the Export / Import Cable will be laid, from the perimeter of the Array Area to MHWS.
Export / Import Cable Route	The area within the Export / Import Export Corridor (EICC) within which the Export/Import Cable Bundle (EICB) is laid, from the perimeter of the array area to MHWS.

TERM	DEFINITION
Floating Turbine Unit (FTU)	The equipment associated with electricity generation comprising the WTG, the floating substructure which supports the WTG, mooring system and the dynamic section of the IAC.
Flotation Energy	Joint venture partner in Cenos Offshore Windfarm Ltd.
Habitats Regulations	The Habitats Directive (Directive 92/43/ECC) and the Wild Birds Directive (Directive 2009/147/EC) were transposed into Scottish Law by the Conservation (Natural Habitats &c) Regulations 1994 ('Habitats Regulations') (up to 12 NM); by the Conservation of Offshore Marine Habitats and Species Regulations 2017 ('Offshore Marine Regulations') (beyond 12 NM); the Conservation of Habitats and Species Regulations 2017 (of relevance to consents under Section 36 of the Electricity Act 1989); the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001; and the Wildlife and Countryside Act 1981. The Habitats Regulations set out the stages of the Habitats Regulations Appraisal (HRA) process required to assess the potential impacts of a proposed project on European Sites (Special Areas of Conservation, Special Protection Areas, candidate SACs and SPAs and Ramsar Sites).
Habitats Regulations Appraisal	The assessment of the impacts of implementing a plan or policy on a European Site, the purpose being to consider the impacts of a project against conservation objectives of the site and to ascertain whether it would adversely affect the integrity of the site.
High Voltage Alternating Current (HVAC)	Refers to high voltage electricity in Alternating Current (AC) form which is produced by the WTGs and flows through the IAC system to the OSCP. HVAC may also be used for onward power transmission from the OSCP to assets or to shore over shorter distances.
High Voltage Direct Current (HVDC)	Refers to high voltage electricity in Direct Current (DC) form which is converted from HVAC to HVDC at the OSCP and transmitted to shore over longer distances.
Horizontal Directional Drilling (HDD)	An engineering technique for laying cables that avoids open trenches by drilling between two locations beneath the ground's surface.

TERM	DEFINITION
Innovation & Targeted Oil and Gas (INTOG)	In November 2022, the Crown Estate Scotland (CES) announced the Innovation & Targeted Oil and Gas (INTOG) Leasing Round, to help enable this sector-wide commitment to decarbonisation. INTOG allowed developers to apply for seabed rights to develop offshore windfarms for the purpose of providing low carbon electricity to power oil and gas installations and help to decarbonise the sector. Cenosis is an INTOG project and in November 2023 secured an Exclusivity Agreement as part of the INTOG leasing round.
Inter-Array Cable (IAC)	The cables which connect the WTGs to the OSCP. WTGs may be connected with IACs into a hub or in series as a 'string' or a 'loop' such that power from the connected WTGs is gathered to the OSCP via a single cable.
Joint Venture	The commercial partnership between Flotation Energy and Vårgrønn, the shareholders which hold the Exclusivity Agreement with CES to develop the Cenosis site as an INTOG project.
Landfall	The area where the Export / Import Cable from the Array Area will be brought ashore. The interface between the offshore and onshore environments.
Marine Licence	Licence required for certain activities in the marine environment and granted under the Marine and Coastal Access Act 2009 and/or the Marine (Scotland) Act 2010.
Marine Protected Area (MPA)	Marine sites protected at the national level under the Marine (Scotland) Act 2010 out to 12 NM, and the Marine and Coastal Access Act 2009 between 12-200 NM. In Scotland MPAs are areas of sea and seabed defined so as to protect habitats, wildlife, geology, underseas landforms, historic shipwrecks and to demonstrate sustainable management of the sea.
Marine Protected Area (MPA) Assessment	A three-step process for determining whether there is a significant risk that a proposed development could hinder the achievement of the conservation objectives of an MPA.
Mean High Water Springs (MHWS)	The height of Mean High Water Springs is the average throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest.

TERM	DEFINITION
Mean Low Water Springs (MLWS)	The height of Mean Low Water Springs is the average throughout a year of the heights of two successive low waters during periods of 24 hours (approximately once a fortnight).
Mitigation Measures	<p>Measures considered within the topic-specific chapters in order to avoid impacts or reduce them to acceptable levels.</p> <ul style="list-style-type: none"> • Primary mitigation – measures that are an inherent part of the design of the Project which reduce or avoid the likelihood or magnitude of an adverse environmental effect, including location or design; • Secondary mitigation – additional measures implemented to further reduce environmental effects to 'not significant' levels (where appropriate) and do not form part of the fundamental design of the Project; and • Tertiary mitigation – measures that are implemented in accordance with industry standard practice or to meet legislative requirements and are independent of the EIA (i.e. they would be implemented regardless of the findings of the EIA). <p>Primary and tertiary mitigation are referred to as embedded mitigation. Secondary mitigation is referred to as additional mitigation.</p>
Mooring System	Comprising the mooring lines and anchors, the mooring system connects the floating substructure to the seabed, provides station-keeping capability for the floating substructure and contributes to the stability of the floating substructure and WTG.
Nature Conservation Marine Protected Area (NCMPA)	MPA designated by Scottish Ministers in the interests of nature conservation under the Marine (Scotland) Act 2010.
Offshore Substation Converter Platforms (OSCPs)	An offshore platform on a fixed jacket substructure, containing electrical equipment to aggregate the power from the WTGs and convert power between HVAC and HVDC for export/import via the export / import cable to / from the shore. The OSCP's will also act as power distribution stations for the Oil & Gas platforms.
Onward Development	Transmission projects which are anticipated to be brought forward for development by 3rd party oil and gas operators to enable electrification of assets via electricity generated by the Project. All Onward Development will subject to separate marine licensing and permitting requirements.

TERM	DEFINITION
Onward Development Area	The area within which oil and gas assets would have the potential to be electrified by the Project.
Onward Development Connections	Oil and gas assets located in the waters surrounding the Array Area will be electrified via transmission infrastructure which will connect to the Project's OSCP's. These transmission cables are referred to as Onward Development Connections.
Project Area	The area that encompasses both the Array Area and EICC.
Project Design Envelope	A description of the range of possible elements that make up the Project design options under consideration and that are assessed as part of the EIA for the Project.
Study Area	Receptor specific area where potential impacts from the Project could occur.
Transboundary Assessment	The consideration of impacts from the Project which have the potential to have a significant effect on another European Economic Area (EEA) state's environment. Where there is a potential for a transboundary effect, as a result of the Project, these are assessed within the relevant EIA chapter.
Transmission Infrastructure	The infrastructure responsible for moving electricity from generating stations to substations, load areas, assets and the electrical grid, comprising the OSCP's, and associated substructure, and the Export / Import Cable.
3Vårgrønn As (Vårgrønn)	Joint venture partner in Cenoss Offshore Windfarm Ltd.
Wind Turbine Generator (WTG)	The equipment associated with electricity generation from available wind resource, comprising the surface components located above the supporting substructure (e.g., tower, nacelle, hub, blades, and any necessary power transformation equipment, generators, and switchgears).
Worst-Case Scenario	The worst-case scenario based on the Project Design Envelope which varies by receptor and / or impact pathway identified.

Executive Summary

This document follows the **Marine Protected Area (MPA) Assessment – Shadow Without Prejudice Derogation Case** that the Cenos Offshore Windfarm Ltd (hereafter referred to as ‘the Applicant’) has provided to support the Scottish Ministers in their determination of the Cenos Offshore Windfarm (hereafter referred to as ‘the Project’). The Applicant has carried out a comprehensive **Marine Protected Area (MPA) Assessment**, which concludes that there will be **no significant adverse effects resulting from the Project which would hinder the conservation objectives of the East of Gannet and Montrose Fields Nature Conservation MPA (ncMPA)** with which the Project overlaps.

However, should the Scottish Ministers be unable to satisfy themselves that there will be no significant effects on the East of Gannet and Montrose Fields ncMPA, the **MPA Assessment – Shadow Without Prejudice Derogation Case** provides clear evidence that the Project should be authorised as it more than adequately meets the derogation requirements set out in the relevant legislation. Both the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 allow for a project to proceed, even where significant damage may occur, provided that additional conditions are met. Those conditions require evidence that the project in question cannot be delivered by any other means (including another location), that the public benefit clearly outweighs the damage that will occur, and that the Applicant demonstrates that Measures of Equivalent Environmental Benefit (MEEB) will be undertaken to compensate for the damage.

This document provides the Applicant’s proposal for MEEB and the suggested implementation strategy, should the Scottish Ministers be unable to satisfy themselves that the Project will not hinder the conservation objectives of the East of Gannet and Montrose Fields ncMPA. As these MEEB create benefit far in excess of the damage predicted to occur as a result of the Project, they are sufficient to allow the Project to proceed should the Scottish Ministers consider there will be significant effects on the ncMPA. The Applicant is confident this document, together with the **MPA Assessment** and the **MPA Assessment – Shadow Without Prejudice Derogation Case**, provide the information required to satisfy Scottish Ministers to proceed with a favourable determination.

1 Introduction

1.1 Summary of the derogation case

The Project is located almost wholly inside the East of Gannet and Montrose Fields (EGMF) ncMPA, located approximately 200 km east of Aberdeen, Scotland. The Export / Import Cable Corridor (EICC) of the Project passes by the Turbot Bank ncMPA at 6 km distance and crosses through the south-eastern portion of the Southern Trench ncMPA. The **Marine Protected Area (MPA) Assessment** concludes that there will be no significant impact from the Project on any of these three protected sites. However, as the project directly overlaps with the EGMF ncMPA, and in reflection of the advice received from the Scottish Minister in the 2024 Scoping Opinion (Scottish Government, 2024) and during engagement with The Joint Nature Conservation Committee (JNCC) and NatureScot, the Applicant has prepared a **MPA Assessment – Shadow Without Prejudice Derogation Case**. This case can be used in the event that Scottish Ministers cannot be satisfied that the Project will not negatively affect (other than insignificantly) the designated features or conservation objectives of the EGMF ncMPA.

As the portion of the Project's export/import cable which overlaps the Southern Trench ncMPA will replace the cable route proposed by the licensed and consented NorthConnect interconnector project, there will be no additional risk of negative impact to this site beyond the consented baseline. Similarly, the **MPA Assessment** demonstrates that there are no credible impact pathways by which the Project can negatively impact the sandeel qualifying features of the Turbot Bank ncMPA. Therefore, the **MPA Assessment – Shadow Without Prejudice Derogation Case** and the **Measures of Equivalent Environmental Benefit (MEEB) and Implementation Strategy** focus solely on the EGMF ncMPA.

The **MPA Assessment – Shadow Without Prejudice Derogation Case** has been provided in support of the Project application for consent. The derogation case establishes that

- the Project's objectives cannot be met by any other means. This includes another location, a different project, or different technology.
- the Project's contribution to Scottish and UK climate mitigation policies, renewable energy and floating offshore wind targets, and supply chain and energy security ambitions, are critical and urgent. It also establishes that these contributions cannot be fulfilled by any other offshore wind project as no others are sufficiently advanced or capable of targeting the North Sea Sector Deal's (NSTD) decarbonisation targets in a sufficient time period.
- The derogation case further describes the significant public benefit of the Project and, in the context of the minimal adverse effects of the Project on the EGMF ncMPA, that this public benefit clearly outweighs the damage that may occur.

For these reasons, the discussion in this document now deals with the final condition required to satisfy Scottish Ministers that the Project can proceed.

1.2 Legislation

Having established that the Project meets these "other means," and "public benefit" conditions set out in the 2009 and 2010 Acts, this document addresses the Applicant's MEEB proposals in order to meet the third criterion:

"That person is not able to satisfy the authority as mentioned in paragraph (a) but... (iii) in relation to a Nature Conservation MPA or a Demonstration and Research MPA, satisfies it and the Scottish Ministers that the person 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 marine protected area concerned” (Marine (Scotland) Act 2010 section 83(4)(b)).

The same condition is described in the Marine and Coastal Access Act 2009 at section 126(7)(c).

The **Measures of Equivalent Environmental Benefit (MEEB) and Implementation Strategy** provides the information required to demonstrate that the MEEB proposals are proportional and feasible. The document also describes a proposed adaptive management plan to account for any failure of the MEEB after implementation.

1.3 Guidance

As noted in the **MPA Assessment – Shadow Without Prejudice Derogation Case**, there have been no examples of MPA derogation cases in Scotland. There is, however, a more substantial suite of examples of derogations under the Habitat Regulations where compensation for negative impacts on a protected site has been implemented in the UK. The recent determination by Scottish Ministers for the Green Volt Offshore Windfarm granted consent for the project with compensation measures, a first in Scotland.

The UK Government’s recent consultation on *Policies to inform updated guidance for Marine Protected Area Assessment* (Defra, 2024), which builds on the earlier consultation on the *Best practice guidance for developing compensatory measures in relation to Marine Protected Areas* (Defra, 2021) both collate MEEB and compensation measures together and provide guidance as to what must be addressed when presenting measures and what hierarchy of solutions to follow.

Accordingly, this document follows the recommended process to:

- Reiterate the conservation objectives of the EGMF ncMPA;
- Establish the level and timescale of the impact; and
- Demonstrate the use of the avoid/reduce/mitigate hierarchy.

Following these points, the proposed MEEB are discussed in detail.

1.4 Stakeholder engagement

The Applicant has anticipated the potential requirement for a without prejudice derogation case for the Project and has proactively sought engagement with the regulator and relevant stakeholders, namely JNCC and NatureScot.

Although the **MPA Assessment** demonstrates that there will be no significant impact on the EGMF ncMPA resulting from the Project, the Applicant has considered potential MEEB and shared these suggestions (described in detail below) with JNCC and NatureScot.

Two dedicated meetings were held, following receipt of the receipt of the Scoping Opinion from Scottish Ministers, with Marine Directorate – Licensing Operations Team (MD-LOT), JNCC, NatureScot and expert advisors supporting the Applicant:

1. On 7 October 2024, the parties above discussed the MPA Assessment methodology and initial findings alongside the potential need for a derogation case.
2. On 21 October 2024, the same group met to discuss the MPA and HRA derogation cases and potential options for MEEB (and compensation under the habitats regulations). The MEEB proposals described in detail below were highlighted and discussed.

At those discussions, no final agreement was reached on the Proposals as the results of the **MPA Assessment** were not yet known. Should a derogation be required, the Applicant is keen to continue engagement with JNCC, NatureScot and MD-LOT to deliver agreed MEEB.

Additional points raised during these meetings, such as clarification on the onward development connections and components of the application, have been addressed through separate discussions and are reported on within the EIAR.

2 Establishing the Level of Impact

2.1 Conservation objectives

The EGMF ncMPA is designated for two Priority Marine Features: offshore deep-sea muds and ocean quahog (*Arctica islandica*) aggregations. Offshore subtidal sands and gravel are also protected as the supporting habitat for ocean quahog.

The EGMF ncMPA covers a total area of 1,839 km² with the protected habitats each covering roughly half of the site. Offshore deep-sea muds cover around 900 km² and is focused in the eastern and southern portion of the site. The remaining 939 km² is made up of the offshore subtidal sands and gravels as the supporting habitat for ocean quahogs.

JNCC have recently (JNCC 2024) updated the supporting information for the EGMF ncMPA. The conservation objectives are that the protected features:

- So far as already in favourable condition, remain in such condition; and
- So far as not already in favourable condition, be brought into such condition, and remain in such condition.

The updated advice also modified the conservation objectives for the specific attributes of the protected features. The features and conservation objectives are summarised in **Table 2-1** below:

Table 2-1 - Conservation objectives for the EGMF ncMPA

PROTECTED FEATURE	SPATIAL EXTENT (KM ²)	CONSERVATION OBJECTIVES (JNCC 2024)
Offshore deep-sea muds	900	<ul style="list-style-type: none">• Attribute: Extent and distribution Conservation Objective: Recover• Attribute: Structure and function Conservation Objective: Recover• Attribute: Supporting processes Conservation Objective: Conserve
Ocean quahog aggregations (including offshore subtidal sands and gravels as their supporting habitat)	939	<ul style="list-style-type: none">• Attribute: Extent and distribution Conservation Objective: Recover• Attribute: Structure and function Conservation Objective: Recover• Attribute: Supporting processes Conservation Objective: Recover

2.2 Level and timescale of impact

The Project is almost completely located within the EGMF ncMPA; a small section of the Array Area extends to the east of the ncMPA (see Figure 2-1).

The potential effects resulting from the Project have been comprehensively identified and assessed in the **MPA Assessment** which accompanies the Project application. The MPA Assessment has considered the potential impact pathways, which are primarily related to temporary and long-term loss of the relevant habitats through placement of new hard substrates onto the seabed. Additional pathways include temporary and long-term disturbance of the seabed sediments which may alter suspended sediment concentrations and deposition levels.

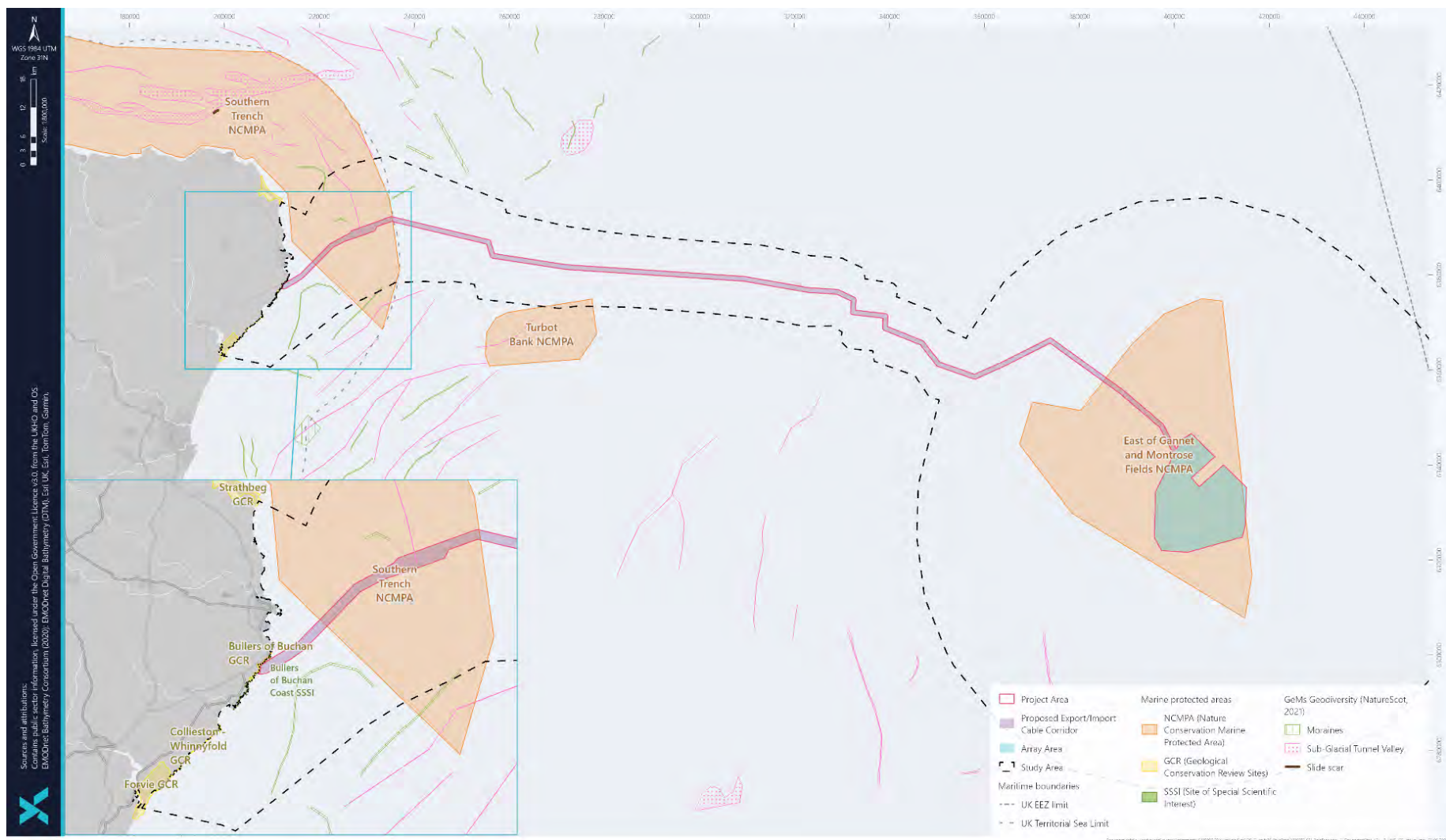


Figure 2-1 - Designated sites in the Project layout

As per the **MPA Assessment**, these impacts can be categorised for the various phases of the project and whether these impacts can be considered as direct or indirect.

Table 2-2 below presents the type and nature of impacts which may affect the qualifying features of the EGMF ncMPA.

Table 2-2 – Potential and nature of impacts on the EGMF ncMPA

POTENTIAL IMPACT	NATURE OF IMPACT
CONSTRUCTION	
Temporary impacts to the seabed and benthic habitats	Direct / indirect
Long-term impacts to the seabed and benthic habitats ¹	Direct
Introduction of hard substrates in a predominantly sedimentary environment / Increased predation ²	Direct / indirect
Potential changes to suspended sediment concentrations and deposition	Direct / indirect
Mobilisation of sediment contaminants	Direct / indirect
Introduction of INNS	Direct / indirect
OPERATIONS AND MAINTENANCE	
Temporary impacts to the seabed and benthic habitats	Direct / indirect
Long-term impacts to the seabed and benthic habitats	Direct
Introduction of hard substrates in a predominantly sedimentary environment / Increased predation	Direct / indirect
Potential changes to suspended sediment concentrations	Direct / indirect
Mobilisation of sediment contaminants	Direct / indirect
Potential effects from EMF and heat generated by cables	Direct
Introduction of INNS	Direct / indirect
DECOMMISSIONING	
Removal of hard structures during decommissioning resulting in loss of colonised surfaces	Direct

As the Project is progressing under a design envelope, a worst-case design scenario is used within the **MPA Assessment** and **Environmental Impact Assessment Report (EIAR)** to establish the

¹ This impact is assessed only in operations and maintenance.

² This impact is assessed only in operations and maintenance.

greatest potential effect on the EGMF ncMPA and its qualifying features. This worst-case scenario is discussed in the **MPA Assessment** and the **EIAR Vol 2, Chapter 5: Project Description** and is not repeated here in detail.

This worst-case design scenario considers the impact from all components of the Project within the EGMF ncMPA and thus describes a maximum effect that could be generated by the Project. Many of the potential impact pathways overlap, such as cable route clearance and cable burial, and the majority of impacts can be categorised as temporary or long-term. Where overlaps in effect exist, the greater of the two impact pathways (and therefore effects) has been assessed.

The **MPA Assessment** clearly demonstrates that, across all impact pathways and features, the Project will not significantly affect the designated features or the conservation objectives of the EGMF ncMPA. The total temporary and long-term impact is described in **Table 2-3**.

Table 2-3 - Approximate area of each protected feature within the EGMF ncMPA and the area impacted by temporary and long-term disturbance

PROTECTED FEATURE	OFFSHORE DEEP-SEA MUDS	OFFSHORE SUBTIDAL SANDS AND GRAVELS HABITAT (SUPPORTING OCEAN QUAHOG AGGREGATIONS)	ENTIRE NCMPA
AREA OF DESIGNATED FEATURE INSIDE NCMPA (KM ²)	900	939	1839
AREA IMPACTED DUE TO TEMPORARY DISTURBANCE (KM ²)	6.38	0.35	6.73
TEMPORARY IMPACT AS % OF DESIGNATED FEATURE	0.71	0.04	0.37
AREA IMPACTED DUE TO LONG-TERM DISTURBANCE (KM ²)	1.56	0.009	1.569
LONG-TERM IMPACT AS % OF DESIGNATED FEATURE	0.17	0.0009	0.08

Temporary impacts will occur during the construction of the Project, which may take place over a period of up to six years. However, impacts to the benthos will not be constant over this period. Inter-array cable (IAC) routes will be disturbed infrequently, for example, with a phase of pre-lay grapnel run and boulder clearance, followed by cable burial at a later stage. The frequency of disturbance has been accounted for in the **MPA assessment** but does not change the overall worst-case scenario in terms of area impacted.

Long-term impacts will occur throughout the operation and maintenance phase of the Project, which is expected to last for 35 years following full commissioning.

Overall, the **MPA assessment** has demonstrated that these impacts represent the worst-case scenario and would not result in any significant effects to offshore deep-sea muds, offshore subtidal

sands and gravels, or ocean quahog, as qualifying habitats and species protected by the EGMF ncMPA.

2.3 Demonstrate the avoid reduce mitigate hierarchy

The Project has been progressed its early design and development over the last four years to limit impacts on the benthos, with the aim of minimising effects on the EGMF ncMPA. Additionally, **EIAR Vol. 2, Chapter 4: Site Selection and Consideration of Alternatives** and the **MPA Without Prejudice Derogation Case** provide further detail regarding the need for the Project to be located inside the EGMF ncMPA. However, within the project design envelope, decisions have been taken to avoid and further reduce the potential for impact on the designated features of the EGMF ncMPA. The environmentally sensitive design principles which have guided design decisions to date and will continue to guide decisions throughout the forthcoming the front-end and detailed design phases, have been provided in **EIAR Vol. 2, Chapter 5: Project Description**.

As disturbance to the seabed has been identified as the key impact pathway for potential effects to the qualifying features of the EGMF ncMPA, certain design options have been the Project design have been removed from consideration. For example, catenary moorings, which require sizeable chains to be laid on the seabed have been removed from the project envelope. Similarly, the designated features within the ncMPA do not completely cover the seabed equally across the site. As such, the Offshore Substation Converter Platforms (OSCP) will be located in areas in which offshore deep-sea muds are not present within the Array Area. This reduces the potential for disturbance of the seabed and the designated features.

As a further example, the Project's 2024 Scoping Report (Cenos, 2024) included the potential for scour protection to be used around the anchor piles. Following further study and the low depth of sediment within the Array Area, the Applicant has now removed the requirement for scour protection across the Project to further reduce the potential for impact the designated features located within the Array Area.

Where necessary, the Project has also employed embedded mitigation within the project design to reduce, as far as possible, the potential for impact on the designated features of the ncMPA and the wider environment.

The remaining potential impact, described in Table 2-3 above, is a representation of the worst-case scenario. There remains the opportunity to reduce any further impacts from the Project through options which are included within the design envelope, but selection of preferred options cannot be guaranteed at this stage, as they are dependent on detailed front-end design and engineering, as informed by pre-construction site investigation and supply chain availability. These options may include refinement of technology, micro-siting, and aligning activities so that temporary impacts are not prolonged, for example. The actual level of impact is, therefore, likely to be lower than described above. However, it is this worst-case scenario residual impact that is addressed by the MEEB below.

3 Measures of Equivalent Environmental Benefit

3.1 Proposal 1 – Strategic compensation

The need for an increase in offshore wind projects has been well established by the Scottish and UK governments. Both governments have also established a clear recognition for the need to deliver compensation measures at a strategic or plan level to allow offshore wind projects to progress through the planning and consenting system. The British Energy Security Strategy (UK Government, 2022) and the Energy Act 2023 both highlight and attempt to address this need. Accordingly, both governments have been exploring the implementation of strategic compensation measures through a Marine Recovery Fund (MRF).

The MRF was proposed through the Energy Act 2023 as a mechanism by which developers of offshore wind projects could discharge their compensation obligations (UK Government, 2023) where adverse effects cannot be avoided. This would enable compensation measures to be identified and managed for multiple projects at once, delivering the best value.

The Scottish Government has, separately and through the Joint Environment Accelerator Programme (JEAP), continued to develop its MRF position and progress secondary legislation to implement a MRF in Scotland for Scottish offshore wind projects. A MRF and strategic compensation measures have the “potential to maximise the benefits of offshore wind development in Scotland and provide a more effective compensatory measures regime” (Scottish Government, 2024b).

The need for a MRF in Scotland has been widely accepted by the offshore wind developer community, as evidenced by Scottish Renewables, the industry representative organisation, which has written multiple letters expressing an urgent need for the MRF and the lack of strategic compensation as a major obstacle for offshore wind development (Scottish Renewables, 2023a, 2023b and 2024).

As the Project’s negative impact on the EGMF ncMPA has been demonstrated to be minimal and will not affect the designated features of the ncMPA (other than insignificantly), contribution to a MRF and implementation of Proposal 2 below are the preferred options for delivery of MEEB for the Project.

3.1.1 Details

As the Project’s negative impact is minimal, and it has been demonstrated through the **MPA Assessment** that it would not affect (other than insignificantly) the designated features of the EGMF ncMPA, the Applicant proposes that it should contribute to the Scottish MRF, if it is available at the time of determination, or will be available prior to the Project reaching the operation and maintenance phase when the long-term effects will be realised.

The EGMF ncMPA protects ocean quahog and their supporting habitat, and offshore deep-sea muds. These features are not unique within the Scottish marine environment and are protected in other ncMPAs, some of which already have offshore wind developments located within them (e.g. Firth of Forth Banks Complex ncMPA). As such, the MRF could contribute to the wider coherence of the network through strategic measures that protect existing habitats which will see much more extensive seabed disturbance through fishing activity, for example. The MRF could also be used to fund the designation of new protected sites or extend existing sites.

3.1.2 Implementation

As the MRF has not yet been set up or accounted for in Scottish legislation, the method of implementation cannot be discussed in detail. The Applicant is willing to collaborate with the Scottish Government and other relevant parties to help establish the MRF and act as the first test case and provide initial funding to finance its inception. As an advanced offshore wind project in Scotland, this would allow the MRF to be tested, on the basis of an established minimal impact Project, and prepare for larger compensation measures that will be required for other offshore wind projects which are in early-phase development (in particular, ScotWind projects).

The Scottish Government has already proactively established the Scottish Marine Environmental Enhancement Fund (SMEEF). Although SMEEF is specifically not established to address compensation measures, the design, governance and financial management processes could be largely similar to an MRF. The Applicant is therefore also proposing that, should there be a continued delay in the creation of the MRF, that the funds provided for the Project could instead be managed through SMEEF. This would allow the funding to be secured as soon as possible and enable Scottish Ministers to make the consent determination in the knowledge that an existing mechanism could be used in place of the MRF.

3.1.3 Monitoring

The MRF would manage strategic compensation measures, including monitoring and governance. As this mechanism has not yet been established, but is urgently needed. There are no proposed monitoring methodologies for testing the efficacy of implementing strategic compensation.

The Applicant is willing and able to assist with these requirements as they are established.

3.2 Proposal 2 – Removal of fishing pressure

The designated features of the EGMF ncMPA are identified in the recent update to the site's Conservation Advice Package as being in an unfavourable condition (JNCC, 2024).

This update also changed the individual attributes of the designated features to “recover” (with the exception of the supporting processes attribute for offshore deep-sea muds, which is set to “conserve”). It is recommended that the pressures from demersal trawling, oil and gas operations, renewable energy generation and cabling should be removed or reduced as part of the management of the site.

The EGMF ncMPA has been designated since 2014 but has had no management measures in place. The ncMPA already contains active oil and gas infrastructure and the recent North Sea Link interconnector, which was commissioned in 2021. There is currently no renewable infrastructure within the EGMF ncMPA. However, the site is regularly targeted as a fishing ground by demersal trawlers and seiners, with concentrated effort in specific areas of the ncMPA, some of which coincide with the Project's Array Area.

Both designated features of the EGMF ncMPA, ocean quahog and offshore deep-sea muds, are very sensitive to bottom-contact fishing methods. Both features are highly sensitive to sub-surface abrasion, and offshore deep-sea muds are also highly sensitive to surface abrasion (FeaST, 2024). The recent Scottish Government *Public Consultation on Fisheries Management Measures within Scottish Offshore Marine Protected Areas* (Scottish Government, 2024c) and the associated *Draft Fisheries Assessment – East of Gannet and Montrose Fields ncMPA* (Scottish Government, 2024d) identified the level of fishing inside the EGMF ncMPA as incompatible with the conservation objectives of the site. These documents propose management measures that include a full closure of the site to demersal gear (excluding seines) or zonal management that would allow demersal gear

(excluding dredge and beam trawling) to continue to operate in the south of the ncMPA. These consultation documents acknowledge that offshore deep-sea muds are sensitive to all types of demersal trawls, but that dredge and beam trawling are more damaging.

Noting the agreement from JNCC and Scottish Government that the fishing effort in the EGMF ncMPA does hinder the achievement of the site's conservation objectives, the Applicant proposes to prevent extensive and damaging bottom contact fishing activity from the portion of the EGMF ncMPA that overlaps with the Project's Array Area. As the negative impact of the Project is minimal and the spatial extent of fishing activity within the Array Area is substantial, the net equivalent environmental benefit would be significant.

3.2.1 Details

As detailed in Section 2.1, the EGMF ncMPA covers an area of 1839 km² and the two qualifying features each occupy about half of the site. Ocean quahog and its supporting habitat are located in the north and western side of the ncMPA, over an area of roughly 939 km². The offshore deep-sea muds occupy the remaining 900 km² in the south and east of the ncMPA.

The Project Array Area occupies 333 km² within the offshore deep-sea muds feature of the NCMPA. It is generally accepted that, as a floating offshore wind project, any fishing activity that requires towed gears, such as demersal or pelagic trawl or seine fishing, will not be able to easily co-exist with the Project. The National Federation of Fishermen's Organisations (NFFO) and the Scottish Fishermen's Federation (SFF) clarified in their *Spatial Squeeze in Fisheries* (2022) report that "floating arrays exclude all trawling." Similarly, the Scottish Government's *Sectoral Marine Plan for Offshore Wind Energy* (Scottish Government, 2020) and the associated *Social and Economic Impact Assessment* (Scottish Government, 2019) both assert that the cessation of all fishing activity within a floating offshore wind project area is expected.

As discussed in the **EIAR Vol. 2, Chapter 4: Site Selection and Consideration of Alternatives**, the location of the Project was selected in part to minimise negative impacts on other sea users, with consideration given to elevated commercial fishing activity across the wider area. However, there remains some overlap with demersal fishing effort within the Array Area, albeit this is limited compared to fishing effort in surrounding waters.

The Applicant has commissioned a long-term fishing effort analysis to help understand the level of fishing activity within and around the Array Area and to help quantify impact for the EIAR. This study, which is presented in **EIAR Vol 4., Appendix 26: Navigational Risk Assessment**, compiled and analysed Automatic Identification System (AIS) data for fishing activity across a three-year period from September 2021 to August 2024. The study area used in the analysis comprises the Project Array Area and the EGMF ncMPA, with a 10 nm buffer surrounding it (**Figure 3-1**). This allows for a clear picture of fishing effort within the region of the Project and the EGMF ncMPA.

The available AIS data can be used to show fishing vessel activity, and this has been separated into transiting and on-effort fishing activity, as well as by gear types (**Figure 3-2**).

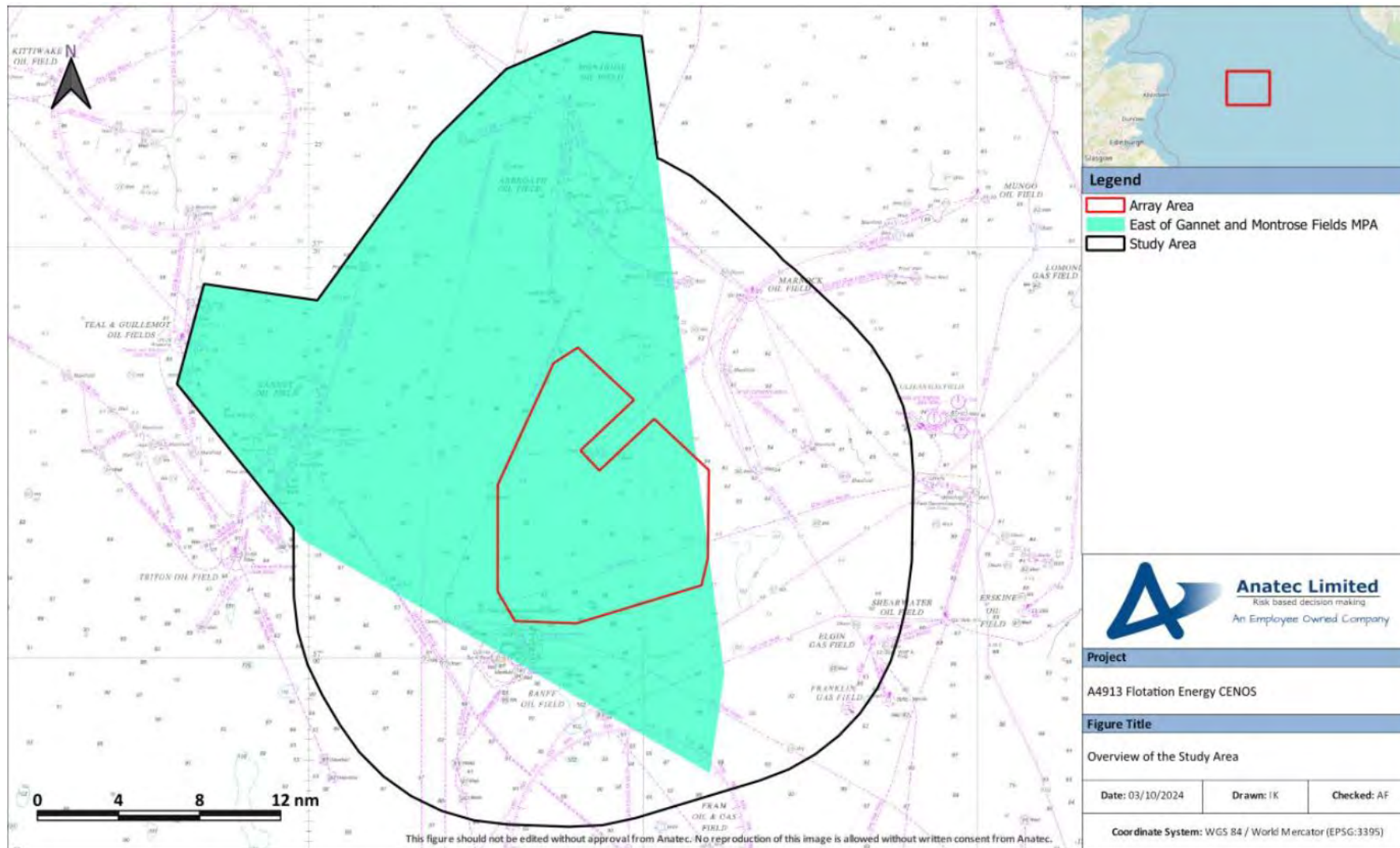


Figure 3-1 - Long-term fishing analysis study area

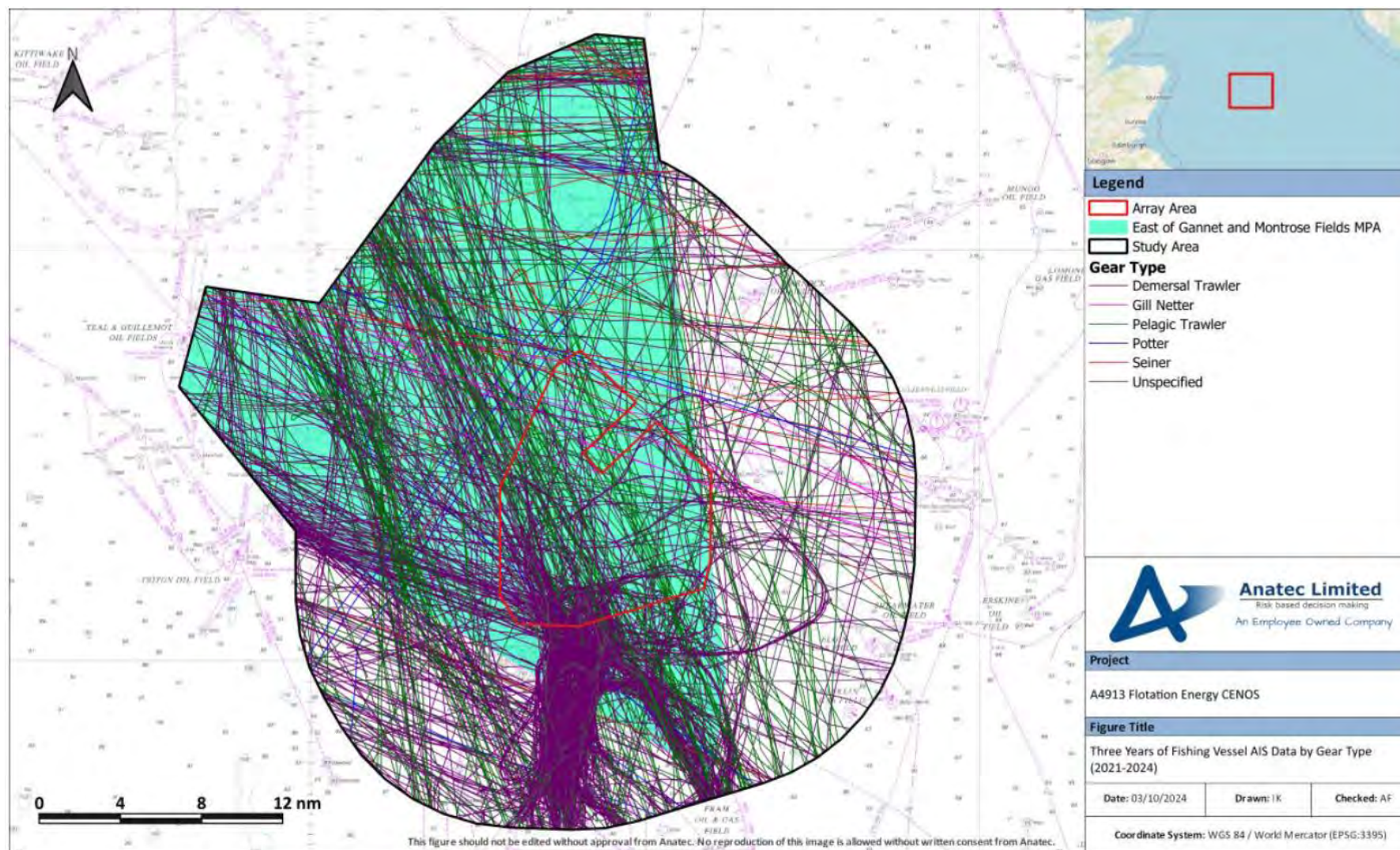


Figure 3-2 - Three years of fishing vessel AIS data by gear type (2021 - 2024)

As is clearly visible in the figures above, the EGMF ncMPA and the wider study area are subject to a range of fishing activity and gear types, though the most prevalent activity was demersal trawling, which constituted roughly 70% of all fishing activity recorded during the assessment period.

Over the three-year study period, the total distance of demersal trawling activity within the EGMF ncMPA was 6,395 km. The majority of this activity was in the south of the ncMPA and coincided with areas identified as offshore deep-sea muds habitat, including areas where the depth of sediments characteristic of this habitat is notably deeper based on survey evidence.

Of the total demersal trawling distance calculated, 1,473 km of demersal trawling effort was located within the Array Area. **Figure 3-3** shows the fishing effort as a heatmap, indicating the concentration of fishing effort relative to the annual mean fishing activity within the study area.

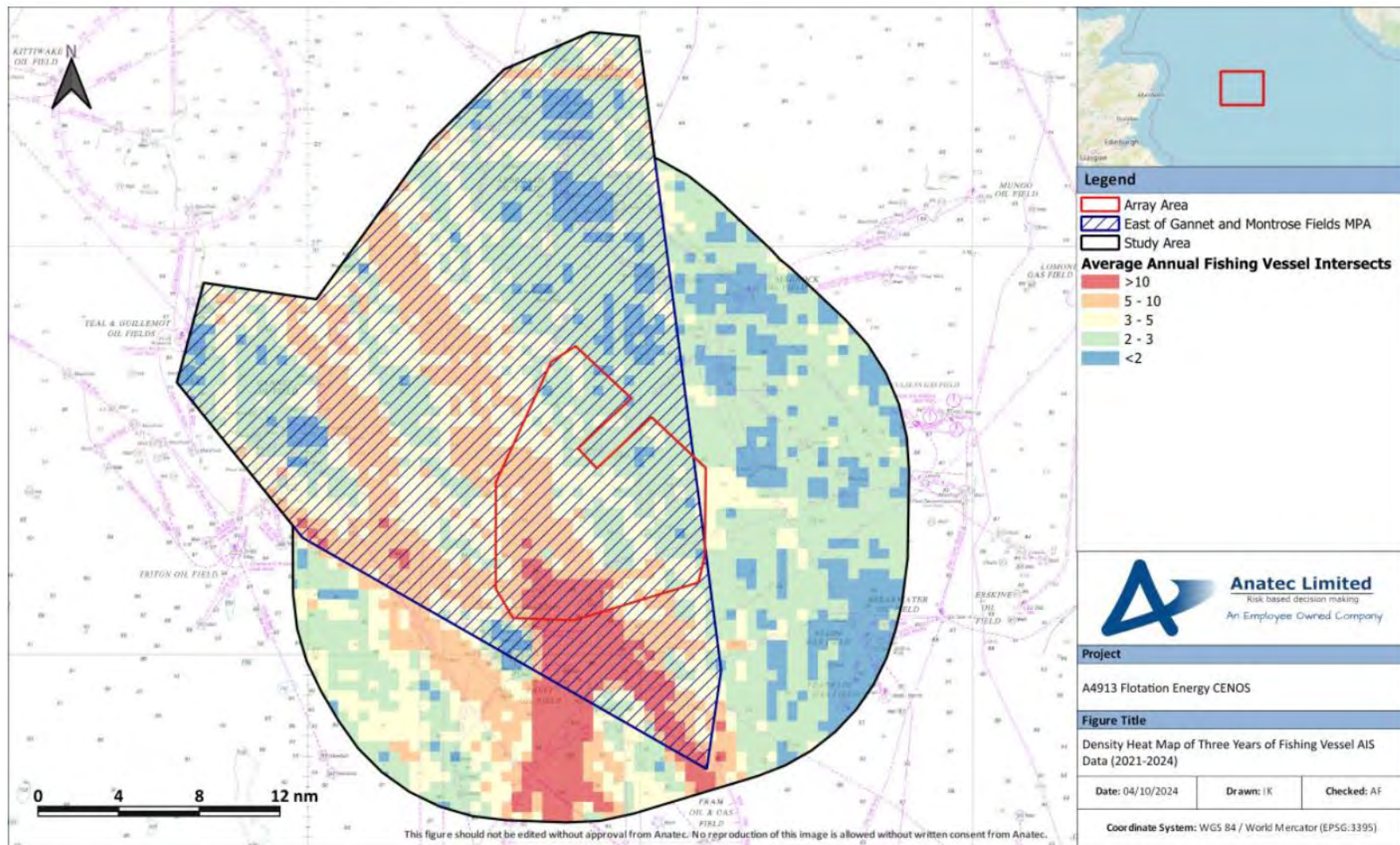


Figure 3-3 - Density heat map of three years of fishing vessel AIS data (2021 – 2024)

The Floating Offshore Wind Centre of Excellence report: *An overview of Scottish Fisheries Prepared for the Floating Offshore Wind Industry* (ORE Catapult, 2021) describes the variety of trawling gear and operational methods for fishing. In this report, the width of the trawl equipment making contact with the seabed is described as approximately 25 m for smaller vessels and up to 65 m wide for larger vessels. Working within this range, this means that an area of between 159.9 km² and 415.7 km² is subjected to direct seabed disturbance within the EGMF ncMPA over a period of three years. Of that total area of seabed disturbance, between 36.9 km² and 95.8 km² of trawling-mediated disturbance would have taken place within the Array Area during the study period.

The Project is targeting an operational lifetime of 35 years. As the EGMF ncMPA has had no management measures in place since its designation, there is no timeline for the adoption of proposed management measures, nor is it guaranteed that these measures will be put in place, existing fishing effort is expected to continue as it has done for the last ten years since the site was designated. Therefore, in the event that the Project does not proceed and management measures are not implemented, the total area subjected to surface and subsurface abrasion within the EGMF ncMPA over the 35-year lifetime of the Project could range from 1,865.2 km² to 4,849.5 km². Of this total area of disturbance, between 429.6 km² and 1,117 km² would take place within the Array Area. These evidence-based figures and their anticipated impacts are presented alongside the predicted impact of the Project in **Table 3-1** and these values are presented as percentages of the area comprising the EGMF ncMPA in **Table 3-2**.

Table 3-1 - Area (km²) of impact resulting from current and projected fishing effort, and the Project

PERIOD (YEARS)	EGMF NCMPA		ARRAY AREA		CENOS
	Minimum impact (km ²)	Maximum impact (km ²)	Minimum impact (km ²)	Maximum impact (km ²)	Total impact inside ncMPA (km ²)
3 (Fisheries analysis period)	159.9	415.7	36.8	95.7	-
6 (maximum temporary Project Impact)	319.8	831.3	73.7	191.5	6.38
35 (Project lifetime/long-term project impact)	1865.2	4849.5	429.6	1117.0	1.56

Table 3-2 - Impact area presented as percentage of EGMF ncMPA and Array Area

PRESSURE	PERIOD	EGMF NCMPA		ARRAY AREA	
		Minimum % impact	Maximum % impact	Minimum % impact	Maximum % impact
Demersal Trawling	6 years	17.4	45.2	22.1	57.5
	35 years	101.4	263.7	129.0	335.4
The Project (worst-case scenario)	6 years (temporary impact)	-	0.37	-	2.02
	35 years (long-term impact)	-	0.08	-	0.47

As illustrated in the tables above, seabed disturbance related impacts from demersal trawling within the EGMF ncMPA and the Array Area are considerably greater than those represented by the Project.

By removing this fishing pressure, the Project will substantially overcompensate for its minor disturbance of the seabed by protecting a vast area from extensive seabed damage over a 35-year period.

As per the MEEB guidance (Defra 2021), this proposal addresses the adverse effect of the Project at the same location as the effect is created. The removal of demersal fishing effort within the Array Area would completely compensate for both the temporary and long-term impacts associated with the Project. Further, it would ensure that the offshore deep-sea muds and ocean quahogs present within the Array Area are not further reduced, as will be the case for the remaining portion of the EGMF ncMPA.

To present the net positive outcome of this proposal more clearly, the loss of 7.94 km² of seabed (combining temporary and long-term effects), would be offset through the elimination of equivalent seabed damage that covers a minimum area of 429 km² and for which there are currently no other methods to remove or reduce.

Whilst the commissioned EICC would not prevent fishing activity or further damage to ocean quahog or their supporting habitat, the available evidence and baseline information supporting the **EIAR** and the **MPA Assessment** has demonstrated that ocean quahog are also present within the Array Area where the habitat has been classified as predominantly offshore deep-sea muds. Therefore, the proposed MEEB would also protect and maintain this qualifying feature of the EGMF ncMPA.

The net positive outcome of this MEEB has been outlined above and the Applicant is confident that this MEEB alone is more than sufficient to satisfy Scottish Ministers that the equivalent environmental benefit is secured. This and Proposal 1 (Section 3.1) are the Applicant's preferred MEEB proposals.

3.2.2 Implementation

There are no legal pathways for the Applicant to restrict or remove other sea users from a given location. Whilst the Applicant will lease the seabed from Crown Estate Scotland for the purpose of offshore renewable energy production, the seabed lease is not exclusive and therefore does not prevent concurrent development from taking place within the lease area.

It has been clearly established and accepted by the commercial fishing sector that demersal trawling and floating offshore windfarms are mutually exclusive. The NFFO and SFF has specifically set out in their *Spatial Squeeze in Fisheries* report that these two activities cannot co-exist (NFFO and SFF, 2022). Further, this same report indicates that the commercial fishing sector expects to lose access to the EGMF ncMPA even without an offshore windfarm development in the area. As such, there is no new or unexpected displacement impact which would need to be addressed in the future due to the citing of the Project.

The Scottish Government has also clearly explained in the Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020) and the associated assessments that the two activities will not co-exist. Scottish Ministers, in adopting the SMP OWE, have confirmed this position.

Therefore, the Project will implement the MEEB throughout the construction and operations and maintenance phases. During construction, the rolling use of safety zones will prevent fishing over areas where construction is taking place, until the project is fully commissioned. No additional cost, other than those already identified, will be required.

3.2.3 Monitoring

This MEEB proposal can be monitored both directly and indirectly.

As detailed in the **MPA Assessment**, various temporary and intermittent seabed impacts from the Project arise at the commencement of the construction phase. During this phase, areas where construction is taking place or where components are to be temporarily deposited on the seabed will be clearly marked and agreed with the Northern Lighthouse Board. Safety notices may also be utilised during construction activity. Additionally, Notice to Mariners (NtM) will be issued regularly to advise other sea users of ongoing activity. This will allow fishers still active in the region to avoid these temporary obstacles, which will, in turn, remove fishing pressure from areas of construction activity.

During construction, the Project will also make use of guard vessels to ensure safe operations within and around the Array Area. This will similarly prevent fishing effort within the areas of construction activity.

During the operations and maintenance phase of the Project, commercial fishers are unlikely to carry out demersal (or pelagic) fishing activity within the Array Area due to commercial and safety risks this would pose.

Utilising AIS monitoring, fishing activity could be actively monitored on-site across project phases and baseline fishing activity would be established across the Array Area, once it was fully commissioned.

Additionally, regular analysis of AIS and Vessel Monitoring System data can be undertaken to demonstrate the success of the MEEB. The Applicant proposes to undertake regular analysis of AIS data at 5-year intervals.

3.3 Proposal 3 - Debris removal

The temporary and long-term adverse effects of the Project within the EGMF ncMPA are minimal and comprise no more than 6.73 km² (temporary) and 1.569 km² (long-term) areas of seabed impact in total. The **MPA Assessment** has demonstrated that these minor effects will not significantly affect the designated features or conservation objectives of the EGMF ncMPA.

As the **MPA Assessment** clarifies, temporary effects will be negated once the component responsible for the effect is removed, or once the initial activity is completed (e.g. cable burial activities form a temporary impact pathway). Therefore, it is the long-term impacts that must be addressed by a suitable MEEB. The MPA Assessment outlines that these temporary impacts will be short-term and limited in extent. Any direct impact to the designated features will not hinder biological recovery or produce any impacts at the population level.

The conservation objectives for the EGMF ncMPA are clear that reduction and removal of pressures (i.e. from fishing, oil and gas infrastructure, renewables and cables) will support the recovery of the designated features. The Applicant proposes that debris removal will also support the recovery of the designated features in the same way and can be carried out at a comparable scale to the predicted long-term impact of the Project.

Debris removal has been indicated as a suitable compensation measure or MEEB in recent offshore wind applications and determinations. It has also been identified in The Crown Estate's Round 4 Habitat Regulations Appraisal and has been accepted as part of the Hornsea Three project's compensation measures (Orsted, 2022).

Through survey efforts in preparation for the consent application to Scottish Ministers, the Applicant has already identified a significant number of suspected debris locations (including various derelict

fishing debris) and proposes to remove those as a suitable MEEB. The Applicant duly notes the *Statutory Nature Conservation Body joint advice on marine debris removal as compensation for impacts to benthic habitats from development* (JNCC et al., 2023) which outlines a general objection to the consideration of marine debris removal as a compensation measure. The issues therein are addressed below.

3.3.1 Details

Geophysical surveys undertaken across the Array Area have highlighted numerous locations of anthropogenic litter or debris. These objects are sitting within the Array Area and are therefore strictly located within the offshore deep-sea muds qualifying feature of the EGMF ncMPA. In the same way that the Project will produce adverse effects through contact with this protected habitat, these objects have removed or reduced the available offshore deep-sea muds habitat and pose a long-term effect on the condition of this feature. As detailed geophysical surveys have not been carried out beyond the Array Area and the EICC, the Project does not currently hold any confirmed evidence that debris exists beyond these regions. However, given the regularity of the debris locations already identified, it can be assumed that there is further litter scattered across the rest of the EGMF ncMPA.

Geophysical surveys carried out by ROVCO (2023) (now called 'Beam Global') on behalf of the Applicant in 2023 provides a detailed picture of the Array Area and EICC outwith 12 NM. Within the EICC 154 objects are identified as debris and a further 83 items of fishing gear were also detected. Within the Array Area and thus fully within the EGMF ncMPA, the survey detected 1,203 debris objects but much fewer fishing items, as only nine were detected. Of the 1,203 debris objects, 139 are interpreted as linear debris, the largest of which is described as 122 m x 1.7 m x 0.4m, which covers an area of 207 m². An extract from the ROVCO (2023) report is shown in **Figure 3-4**.

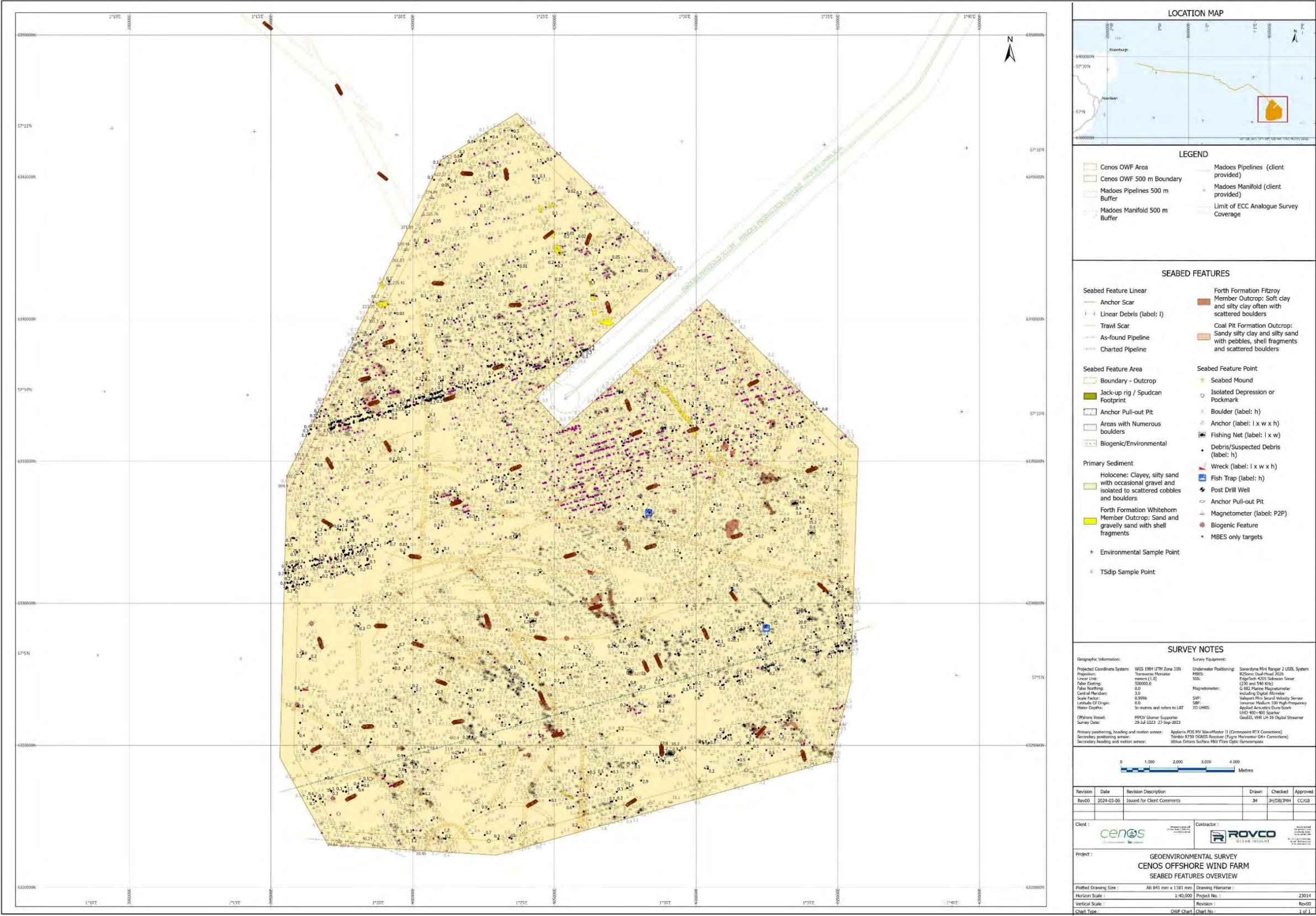


Figure 3-4 - Array Area geophysical seabed survey overview, ROVCO 2023

As can be seen in the image at Appendix 1, debris is located throughout the Array Area but can be found in concentrations in the northwest and southeast of the survey area. At this stage it is not clear exactly what the debris comprises, but video evidence collected alongside the survey indicates that this is mostly metal objects, and many seem to have been dropped in a line, suggesting they may be dropped from a passing vessel. These objects vary in size, with the image at Appendix 1 only indicating height above the seabed.

The guidance for consideration of MEEB is clear that the most beneficial measures are those which are delivered in the same location as the negative impact and those which benefit the same designated features. Removal of these debris items would therefore directly remove the same type of impacts as the Project (e.g. long-term impacts to the seabed and benthic habitats; introduction of hard substrates; abrasion; smothering; etc). Moreover, certain types of debris, such as fishing nets, can remain mobile in the marine environment, making it difficult to predict the magnitude of effect, as their elicited impacts will vary in both location and frequency whilst the debris remains unrecovered. A static source of impact offers a greater chance of localised habitat or community recovery than one that could introduce multiple widespread impact events within the same area.

Additionally, the Project will also undertake measures to remove the risk of entanglement to marine mammals and diving seabirds by retrieving fishing gear that becomes ensnared on the Project infrastructure. These removal operations can be combined.

As the full size and quantity of the debris is not yet known at this time, the Applicant also proposes to extend the debris removal operation to the wider EGMF ncMPA. This will allow the debris removal MEEB to overcompensate for the adverse effects of the Project by recovering additional areas of the designated features which are impacted by debris across the entirety of the site. The exact quantity of further debris to be removed will be identified through additional survey work.

The Statutory Nature Conservation Bodies (SNCB) have expressed concern that debris removal does not qualify as a compensation measure for Adverse Effect on Site Integrity (AEOSI) (JNCC *et al.*, 2023). Where AEOSI has been identified through the course of assessing the effect of a project on protected sites, such as Special Areas of Conservation or Marine Conservation Zones, the paper clearly explains that the SNCB do not believe that:

- The removal of debris relates to the conservation objectives of the sites;
- The one-off campaign to remove litter does not equate to the long-term impact of the project, in the case of the SNCB paper this is related to the specific impact on the sandbanks and reefs;
- The act of removing debris may itself cause detrimental effects to the protected feature;
- The overall coherence of the network cannot be guaranteed; and
- The effects of the debris removal cannot be sufficiently monitored to determine if the MEEB has been effective.

These concerns were raised in relation to specific project applications and were collated in the referenced paper. Despite these concerns, the UK government has accepted debris removal as a viable compensation option.

The Applicant has reviewed the concerns of the SNCBs and is confident that, in this case, due to the nature of the impact and the designated features of the EGMF ncMPA, these concerns should not prohibit the successful implementation of debris removal as a MEEB for the Project.

The conservation objectives and supplementary advice for the EGMF ncMPA also do not list marine debris as a pressure concern. They do however note that the status of both features is unfavourable and that both should be recovered. Fishing activity, oil and gas infrastructure, renewables and cables have been proposed as needing to be removed or reduced to aid the recovery of the EGMF ncMPA,

per the site's recently updated management measures. Whilst marine debris is not described specifically, the act of removing oil and gas infrastructure would have the same result as debris removal, in that the protected feature under the removed object(s) would be allowed to recover and act as a supporting habitat once again.

The argument that a one-off debris removal campaign would not secure the MEEB for the lifetime of the Project is valid. The Applicant therefore proposes that a regular review of the Array Area (and wider ncMPA if required) is completed and further removal campaigns targeting new debris are designed and implemented. As described above, the Project will directly limit fishing activity within the Array Area and as such, would limit the opportunity for new marine debris generated by the fishing industry to enter the area. However, this would not be the case for the wider EGMF ncMPA, which would benefit from additional debris removal campaigns.

In order to establish that the act of removing debris from the seabed would not cause additional damage to the designated features, a detailed implementation plan and retrieval methodology would need to be agreed (following new survey work, as required) and signed off by the SNCB and Scottish Ministers. Retrieval of dropped objects and other items from the seabed is an established process and best practice would be adhered to in order to minimise any potential adverse impacts. This is in keeping with the SNCB paper that specifically highlights that as long as best practice is followed and the work is coordinated with trained ecologists, and in accordance with agreed plans, that the removal of debris can be completed without impact to the designated features.

The remaining concerns, regarding the overall coherence or the integrity of the MPA network and the ability to effectively monitor the MEEB are related. Effective monitoring of debris removal will determine if the MEEB has been successful. If successful, the integrity of the MPA network can be inferred. The Applicant proposes that this MEEB must be fully developed in collaboration with the relevant SNCB to establish an accepted baseline, removal methodology, and monitoring campaign. These steps, combined with adaptive management will enable the efficacy of the MEEB to be assessed and the question of the MPA network integrity to be addressed.

3.3.2 Implementation

Debris removal will be implemented in several stages which will target the removal activity to begin at the same time as initial pre-construction and construction activities thereby ensuring that the MEEB is implemented before the adverse effects of the Project materialise.

As developed for the Hornsea Three project, a comprehensive baseline report will be produced based on the current available information. Using available data and desktop analysis, key areas for additional survey work (e.g. outside of the Array Area but inside the EGMF ncMPA) will be identified and surveys will be undertaken.

Using the updated survey information, a detailed debris removal plan will be developed. This plan will set out the target debris items, the quantities involved, the removal methodology and the full monitoring campaign. This plan will be developed in consultation with JNCC, NatureScot, the commercial fishing sector and Scottish Ministers via MD-LOT. No work to remove debris shall begin until this plan is agreed with Scottish Ministers. For areas outside of the Array Area, there will be a need to proactively survey the key regions as soon as possible.

Once agreed, the plan will be implemented, and debris removal will take place up to and during the construction phase of the project for the Array Area. Removal of debris outside the Array Area would be able to take place at the same time or during the operations and maintenance phase.

The agreed monitoring campaign would be implemented and regular updates provided to SNCB and Scottish Ministers.

Further survey work and retrieval of debris from the seabed may require additional European Protected Species Licences and/or Marine Licences. Any required licence applications will be made in conjunction with the debris removal plan.

3.3.3 Monitoring

As described above, the debris removal plan will include a comprehensive monitoring methodology and campaign that will allow the efficacy of the MEEB to be assessed. This plan, and the monitoring aspect will be developed with the relevant SNCB(s) to ensure the plan follows best practice and any specific requirements.

3.4 Proposal 4 – designation of other sites

The Project has established, through the detailed MPA Assessment that the adverse effects of the Project on the EGMF ncMPA are minimal and will not affect the designated features or the conservation objectives of the site. It is, however, demonstrated that the Project will have a long-term impact on the designated features of the ncMPA, equating to 1.569 km².

The designation of another ncMPA for the equivalent area impacted by the Project would entirely offset the adverse effects and ensure the integrity of the MPA network.

3.4.1 Details

Following the MEEB guidance and compensation hierarchy, the designation of a new ncMPA for offshore deep-sea muds and ocean quahog would meet the requirements completely. It is, however, less attractive than other measures as it would necessarily need to take place at a location with greater distance from the location of the impact.

Offshore deep-sea muds and ocean quahogs are not unique to the EGMF ncMPA in Scottish waters and there are a number of other ncMPAs with these designated features.

A new ncMPA could be designated for these features and, given the very small long-term impact of the project on the seabed, a small designation would be sufficient. As the designation would only have to equate to 1.569 km² to compensate for the Project, these impacts would be better addressed by extending an existing ncMPA. In fact, this extension could be made to the EGMF ncMPA, along the western edge of the site, where both designated features are present.

3.4.2 Implementation

The Applicant is unable to designate any new ncMPA. This power is held by the Scottish and UK Government. In Scottish waters, this is differentiated by reserved powers depending on the location of the new MPA.

As described above, the Applicant has demonstrated that there is no significant effect of the project on the EGMF ncMPA and the designation of a new MPA for such a small area of designated features would likely be met with resistance by key stakeholders. As such, it would be more practical to modify one or more existing ncMPAs with the same designated features to increase their size fractionally. This could be implemented at the same time as management measures are introduced for the offshore ncMPAs in Scotland.

3.4.3 Monitoring

The designation of a new ncMPA or extending an existing ncMPA would not require any monitoring to ensure the MEEB has been delivered as the designation would ensure the integrity of the network.

3.5 Adaptive management

The proposed MEEB are sufficient to compensate and, in the case of the preferred measures, substantially overcompensate for the minimal adverse effects of the Project. That being said, should any of these MEEB be implemented, an agreed approach to monitoring and adaptive management will ensure that the MEEB are effective and that the integrity of the ncMPA site network is maintained.

Only Proposal 2 – Removal of fishing pressure and Proposal 3 - Debris removal would require regular monitoring to determine the efficacy of the MEEB.

Proposal 2 is not expected to require any adaptive management as it is a well-accepted outcome of numerous studies on the potential for interaction and the risks associated with co-existence between floating offshore wind and commercial fisheries. Proposal 2 is also such a significant overcompensation for the effects of the Project that, if even 75% of the fishing effort returned to the area, the 25% reduction would still sizeably outweigh the adverse effects of the Project. Upon review, if the MEEB was demonstrated to be ineffective, then adaptive management, including changes to the measure or revisiting other options above would be explored with the relevant stakeholders. If changes are not sufficient, contribution to strategic compensation measures through the MRF should be agreed.

Proposal 3 would require the creation of a debris removal plan which includes an agreed monitoring campaign. Building on that plan, a process of adaptive management would also be agreed whereby regular analysis and updates would be provided to the SNCB for review and, if deemed appropriate, additional actions such as extra removal campaigns or changes to removal methodology can be incorporated. Removal of debris at other ncMPA with the same designated features could also be included. This would require an update to the debris removal plan and further consultation and agreement with Scottish Ministers. If the MEEB is deemed to be unsuccessful at the time of review, other measures could be revisited and contribution to strategic compensation measures through the MRF should be agreed.

4 Conclusions

The Applicant has presented four Measures of Equivalent Environmental Benefit, each of which would more than compensate for the minimal negative impact of the Project.

Each MEEB, if required, would be documented in a delivery plan, in consultation with relevant stakeholders, and would then need to be agreed with Scottish Ministers before implementation.

Following on from the **MPA Assessment Without Prejudice Derogation Case**, the Applicant believes this discussion of potential MEEB is sufficient to satisfy Scottish Ministers that the Applicant has prepared and is able to undertake the MEEB set out. As such, the Scottish Ministers can be satisfied that the derogation conditions have been met and that the Project can be authorised.

It is once again noted that the results of the **EIAR** and the detailed **MPA Assessment** demonstrate that these MEEB will not be required.

5 References

Cenos Offshore Windfarm Ltd (2024). Cenoss Offshore Windfarm EIA Scoping Report. Available online at: https://marine.gov.scot/sites/default/files/cenos_offshore_windfarm_eia_scoping_report_-_volume_1_redacted.pdf [Accessed December 2024].

Department for Environment, Food and Rural Affairs (Defra) (2021). Best practice guidance for developing compensatory measures in relation to Marine Protected Areas. Available online at: https://consult.defra.gov.uk/marine-planning-licensing-team/mpa-compensation-guidance-consultation/supporting_documents/mpacompensatorymeasuresconsultationdocument.pdf [Accessed December 2024].

Department for Environment, Food and Rural Affairs (Defra) (2024). Consultation on policies to inform guidance for Marine protected Area (MPA) assessments. Available online at: https://consult.defra.gov.uk/offshore-wind-environmental-improvement-package/consultation-on-updated-guidance-for-environmental/supporting_documents/090224%20OWEIP%20Consultation%20on%20updated%20policies%20to%20inform%20guidance%20for%20MPA%20assessments_.pdf [accessed December 2024].

JNCC (2024). Supplementary Advice on Conservation Objectives for East of Gannet and Montrose Fields Nature Conservation MPA. Available online at: <https://data.jncc.gov.uk/data/7d1e751a-e082-405b-aad9-51eeaf53dd67/egmf-saco-v2-0.pdf> [Accessed 07/10/2024].

JNCC, Natural England, Natural Resources Wales, NatureScot, DAERA (2023). Statutory Nature Conservation Body joint advice on marine debris removal as compensation for impacts to benthic habitats from development. Available online at: <https://data.jncc.gov.uk/data/a2b71fd2-8687-4dc7-8224-d6b8c3beed95/sncb-joint-advice-marine-debris-removal.pdf> [Accessed December 2024].

National Federation of Fishermen's Organisations, Scottish Fishermen's Federation, (2022). Spatial Squeeze in Fisheries. Available online at: https://s3.eu-west-2.amazonaws.com/assets.sff.co.uk/publications/R3900_SpatialSqueeze_MainRpt-Final_23Jun2022.pdf [Accessed December 2024].

NatureScot (2024). Feature Activity Sensitivity Tool (FeAST). Available online at: <https://www.nature.scot/professional-advice/protected-areas-and-species/priority-marine-features-scotlands-seas/feature-activity-sensitivity-tool-feast> [Accessed December 2024].

Offshore Renewable Energy Catapult (2021). An overview of Scottish Fisheries Prepared for the Floating Offshore Wind Industry. Available online at: <https://fowcoe.co.uk/wp-content/uploads/2023/09/7524-Catapult-Report-%E2%80%93-Overview-of-Scottish-Fisheries-%E2%80%93-28.10.21.pdf> [Accessed December 2024].

Orsted (2022). Hornsea Three Sandbank Implementation Plan. Appendix One: Marine Debris Removal Campaign Desktop Study. <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003643-Hornsea%20Three%20SBIP%20Appendix%20One%20Marine%20Debris%20Removal%20Campaign%20Desktop%20Study.pdf> [Accessed December 2024].

Rovco 2023. Cenoss Offshore Windfarm Array Geophysical Results Report.

Scottish Government (2019). Draft Sectoral Marine Plan for Offshore Wind Energy Social and Economic Impact Assessment. Available online at: <https://www.gov.scot/publications/draft-sectoral-marine-plan-social-economic-impact-assessment/pages/16/> [Accessed December 2024].

Scottish Government (2020). Sectoral Marine Plan for Offshore Wind Energy. Available online at: <https://www.gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/> [Accessed December 2024].

Scottish Government (2024a). Cenos Offshore Windfarm Scoping Opinion. Available online at: [https://marine.gov.scot/sites/default/files/scop_0044 - cenos offshore wind farm - scoping opinion.pdf](https://marine.gov.scot/sites/default/files/scop_0044_-_cenos_offshore_wind_farm_-_scoping_opinion.pdf) [Accessed December 2024].

Scottish Government (2024b). National Marine Plan 2 – Planning position statement: consultation. Available online at: <https://www.gov.scot/publications/nmp2-planning-position-statement/pages/7/> [Accessed December 2024].

Scottish Government (2024c) Public Consultation on Fisheries Management Measures within Scottish Offshore Marine Protected Areas. Available online at: <https://consult.gov.scot/marine-scotland/fisheries-management-measures-within-offshore-mpas/> [Accessed December 2024].

Scottish Government, 2024d. Draft Fisheries Assessment – East of Gannet and Montrose Fields ncMPA: Fisheries management measures within Scottish Offshore Marine Protected Areas (MPAs). Available online at: <https://www.gov.scot/publications/draft-fisheries-assessment-east-gannet-montrose-fields-ncmpa-fisheries-management-measures-within-scottish-offshore-marine-protected-areas-mpas> [Accessed December 2024].

The Crown Estate (2020). Offshore Wind Round 4 Plan Habitats Regulations Assessment. Available online at: <https://www.marinedataexchange.co.uk/details/3582/2022-the-crown-estate-2020-offshore-wind-round-4-plan-habitats-regulations-assessment/packages> [Accessed December 2024].

Scottish Marine Environmental Enhancement Fund (2024). Available online at: <https://smeef.scot/> [Accessed December 2024].

Scottish Renewables (2023a). Response to: Department for Environment, Food & Rural Affairs (DEFRA) – Request for Information: Marine Recovery Fund (October 16, 2023). Available online at: https://www.scottishrenewables.com/assets/000/003/433/231107_MRF_RFI_Scottish_Renewables_Final_v1_original.pdf?1699438874 [Accessed December 2024]

Scottish Renewables (2023b) - Updated Response to Scottish Government Call for Views: Strategic Compensation – Marine Recovery Fund. Available online at: https://www.scottishrenewables.com/assets/000/003/434/231107_MRF_CFI_Scottish_Government_Scottish_Renewables_Revised_Response_v1_original.pdf?1699439345 [Accessed December 2024].

Scottish Renewables (2024). Energy Act 2023 ecological compensation secondary legislation. Available online at: [https://www.scottishrenewables.com/assets/000/004/222/Letter to the Scottish Government - Energy Act 2023 Ecological Compensation Secondary Legislation Scottish Renewables 11.10.24_original.pdf?1728638436](https://www.scottishrenewables.com/assets/000/004/222/Letter_to_the_Scottish_Government_-_Energy_Act_2023_Ecological_Compensation_Secondary_Legislation_Scottish_Renewables_11.10.24_original.pdf?1728638436) [Accessed December 2024]