

August 2026

Holistic Network Design – Implementation Plan SEA Statement



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Acronyms/Abbreviations

Acronyms/Abbreviations	Definition
AA	Appropriate Assessment
ADD	Acoustic Deterrent Devices
AEoSI	Adverse Effects on Site Integrity
BAT	Best Available Techniques / Technology
BFF	Biodiversity, Flora and Fauna
BNG	Biodiversity Net Gain
CEMP	Construction Environmental Management Plan
CF	Climatic Factors
CH	Cultural Heritage
CIRIA	Construction Industry Research and Information Association
CPZ	Cable Protection Zone
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DESNZ	Department of Energy, Security and Net Zero
EA	Environment Agency
EDR	Effective Deterrence Range
EMF	Electromagnetic Frequency
ESCP	Erosion and Sedimentation Control Plan
ESG	Environmental sub-group
EWG	Environmental Working Group
GB	Great Britain
GHG	Greenhouse Gas
GSL	Geology, Soils and Land use
HDD	Horizontal Direction Drilling
HE	Historic England
HER	Historic Environment Record



Acronyms/Abbreviations	Definition
HES	Historic Environment Scotland
HND	Holistic Network Design
HNDFUE	Holistic Network Design Follow Up Exercise
HPMA	Highly Protected Marine Area
HRA	Habitats Regulations Assessment
HVAC	High-Voltage Alternating Current
HVDC	High-Voltage Direct Current
IMO	International Maritime Organisation
INNS	Invasive Non-Native Species
INTOG	Innovation and Targeted Oil and Gas
JNCC	Joint Nature Conservation Committee
LCA	Landscape Character Area
LMP	Lighting Management Plan
LSE	Likely Significant Effect
LVIA	Landscape and Visual Impact Assessment
MA	Material Assets
MARP	Marine Archaeology Reporting Plan
MCZ	Marine Conservation Zone
MEEB	Measures of Equivalent Environmental Benefit
MGN	Marine Guidance Note
MNG	Marine Net Gain
MMMP	Marine Mammal Mitigation Plan
MMO	Marine Management Organisation
MoD	Ministry of Defence
MPA	Marine Protected Area
MS	Marine Strategy
NCA	National Character Area
NCMPA	Nature Conservation Marine Protected Area
NE	Natural England

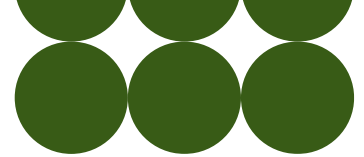


Acronyms/Abbreviations	Definition
NESO	National Energy System Operator
NLCA	National Landscape Character Area
NRW	Natural Resources Wales
OREAP	Offshore Renewable Energy Action Plan
OSEA	Offshore Energy SEA
PAD	Protocol for Archaeological Discoveries
PAM	Passive Acoustic Monitoring
PHH	Population and Human Health
PPG	Pollution Prevention Guidance
RSPB	Royal Society for the Protection of Birds
RYA	Royal Yachting Association
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SEO	Strategic Environmental Objective
SEPA	Scottish Environmental Protection Agency
SFF	Scottish Fishermen's Federation
SNCB	Statutory Nature Conservation Body
SOPEP	Shipboard Oil Pollution Emergency Planning
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
UKCEH	UK Centre for Ecology and Hydrology
UXO	Unexploded Ordnance
VMS	Vessel Monitoring System
WFD	Water Framework Directive
WHS	World Heritage Site
WSI	Written Scheme of Investigation
WWTW	Wastewater Treatment Works

1. Introduction

1.1 Purpose of this report





1.1 Purpose of this report

This Strategic Environmental Assessment (SEA) Statement has been prepared as part of the SEA for the Holistic Network Design (HND) Implementation Plan. This document provides information on the decision-making process and further details the ways in which environmental considerations, the views of consultees, the recommendations of the SEA Environmental Report have influenced and been taken into account by the HND Implementation Plan.

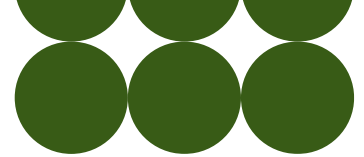
It also details the ways in which the Habitats Regulations Assessment (HRA), carried out under the Conservation of Habitats and Species Regulations 2017 as amended (England and Wales and their inshore waters), the Conservation (Natural Habitats, &c) Regulations 1994 (Scotland on land and within inshore waters), and The Conservation of Offshore Marine Habitats and Species Regulations 2017 (UK offshore waters), and the Marine Conservation Zone (MZC) assessment, carried out under Section 126 of the Marine and Coastal Access Act 2009), have influenced and been taken into account by the HND Implementation Plan.

The HND Implementation Plan has been developed by the National Energy System Operator (NESO) on behalf of Department of Energy, Security and Net Zero (DESNZ). The SEA of the HND Implementation Plan has been completed on behalf of NESO. The HND Implementation Plan is being developed by NESO to deliver the combined offshore network design recommendations, and approved variations, of the initial Holistic Network Designs (HND), Holistic Network Design Follow Up Exercise (HNDFUE) Scotwind, HNDFUE Celtic Sea and HNDFUE Innovation and Targeted Oil and Gas (INTOG) offshore designs.

This SEA Statement has been prepared in accordance with the European Communities Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA Directive) and in accordance with The Environmental Assessment of Plans and Programmes Regulations 2004 (S.I. 2004 No. 1633), The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (Welsh Statutory Instrument 2004 No. 1656), and the Environmental Assessment (Scotland) Act 2005 (2005 asp 15) (the 'SEA Regulations').

As specified by Regulation 16(4) of The Environmental Assessment of Plans and Programmes Regulations 2004; Regulation 16(4) of The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, and Section 18(3) of the Environmental Assessment (Scotland) Act 2005, this SEA Statement summarises the following information:

- How environmental considerations have been integrated into the Plan or programme (Section 2);
- How the environmental report has been taken into account (Section 3);
- How the opinions expressed in response to the invitations mentioned in regulations for public consultation have been taken into account (Section 4);



- How the results of any consultations entered into under regulations in relation to transboundary consultation have been taken into account (Section 4);
- The reasons for choosing the Plan or programme, as adopted, in the light of the other reasonable alternatives dealt with (Section 5); and
- The measures that are to be taken to monitor the significant environmental effects of the implementation of the Plan or programme (Section 6).

2. How environmental considerations have been integrated into the Plan

- 2.1 Introduction
- 2.2 SEA Screening
- 2.3 SEA Scoping
- 2.4 SEA Environmental Report
- 2.5 Consultations
- 2.6 Habitats Regulations Assessment
- 2.7 MCZ Assessment
- 2.8 SEA Statement
- 2.9 Adoption of the HND Implementation Plan





2.1 Introduction

The SEA Regulations/Act require that certain Plans and Programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, are subject to the SEA process. SEA legislation and guidance recommend that Plan preparation, SEA, HRA and MCZ should be integrated and prepared in an iterative manner, in order to facilitate the ongoing assessment and evaluation of environmental considerations during preparation of the Plan. The SEA process is broadly comprised of the stages given a summary description in **Table 1** and shown in **Figure 1**.

The SEA, HRA and MCZ assessment processes have been developed and undertaken in integration with the development and assessment of the HND Implementation Plan. This section presents a summary of how environmental considerations have informed the HND Implementation Plan preparation process.

SEA Stages

Stage	Description	Status
Screening	Determines whether SEA is required for a Plan / Programme in consultation with the designated statutory consultees.	Completed March 2025
Scoping	Determines the scope and level of assessment detail for the SEA, in consultation with the designated statutory consultees.	Completed June 2025
Environmental Assessment	Formal and transparent assessment of the likely significant impacts on the environment arising from the implementation of the Plan / Programme, including all reasonable alternatives. The output from this is an Environmental Report, which must go on public display along with the draft Plan / Programme.	Completed April 2025 – September 2025
SEA Statement	Summarises the process undertaken and identifies the manner in which environmental considerations and consultations have been integrated into the final Plan / Programme.	Current Stage

Table 1: Summary descriptions of the main stages in the SEA process

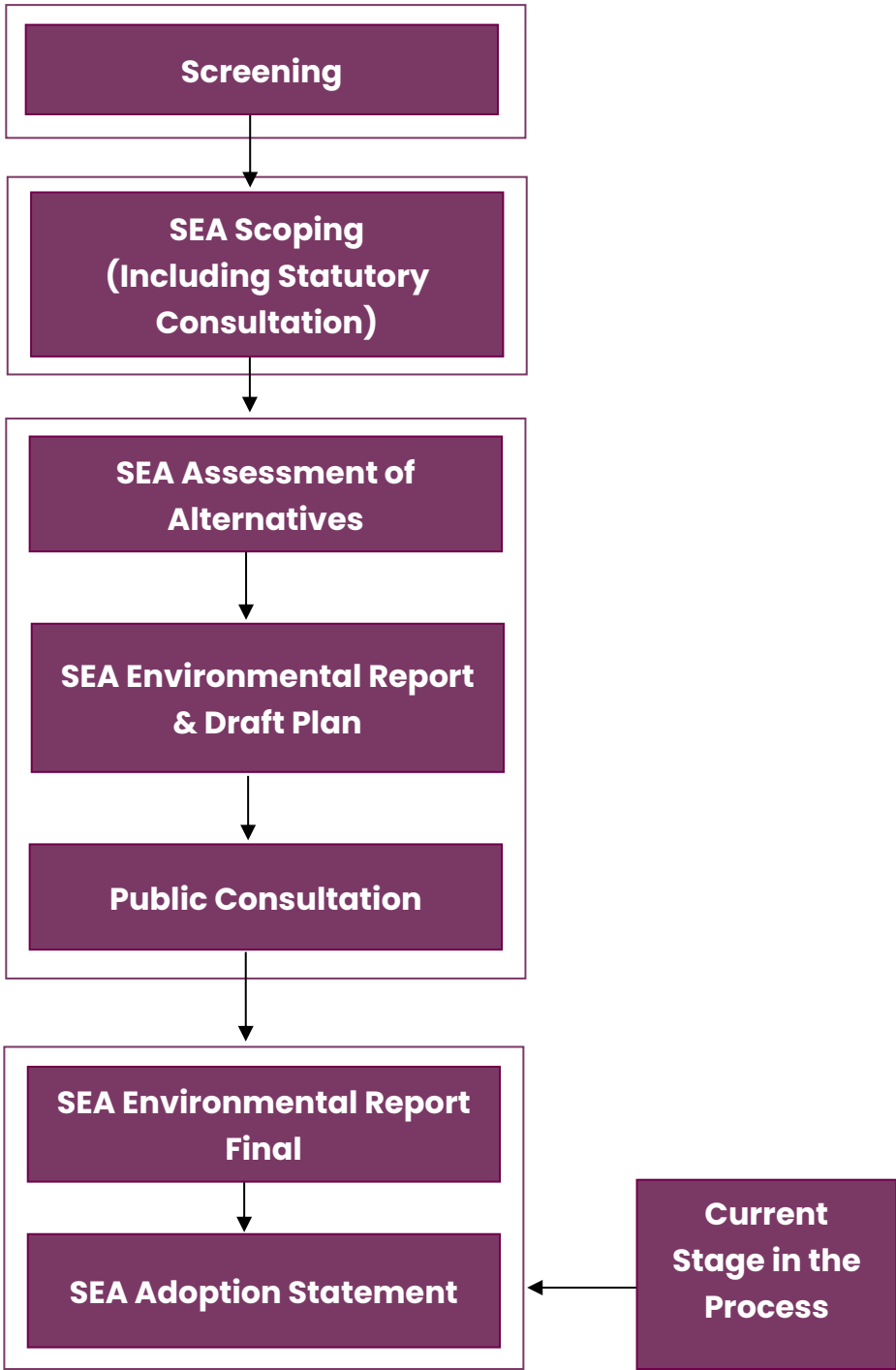
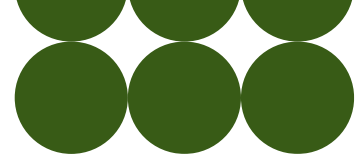


Figure 1: Overview of the SEA process



2.2 SEA Screening

Tetra Tech, on behalf of NESO, conducted SEA screening in accordance with the Office of the Deputy Prime Minister (ODPM) “Practical Guide to the Strategic Environmental Assessment Directive” (2005), which sets out the application of the SEA Directive to Plans and Programmes and which establishes whether the Plan should be subject to SEA, using a series of procedural tasks.

The SEA screening determined that SEA was required for the Plan. This was determined based on the following rationale:

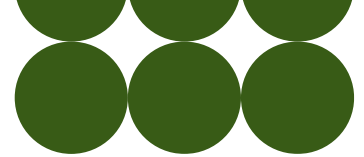
- Although the Plan does not set a framework for development that strictly falls within Annex I or II of the EIA Directive, given the intent of the Directive and the voluntary undertaking of EIA for recent projects involving significant subsea cabling and associated onshore infrastructure, it is considered that the Plan should be subject to SEA.
- Regardless of the strict consideration of EIA works for which the Plan may set a framework for future development, it has been determined that the Plan requires an assessment pursuant to Article 6 or 7 of the Habitats Directive in view of the likely effect on European sites.

2.3 SEA Scoping

The SEA Scoping for the HND Implementation Plan took place from January to February 2025, followed by statutory consultation from April to June 2025. An SEA Scoping Report was produced as part of the scoping phase of the SEA for the HND Implementation Plan. The purpose of the Scoping Report was to provide sufficient information on the HND Implementation Plan to enable the consultees to form an opinion on the appropriateness of the scope, format, level of detail, methodology for assessment and the consultation period proposed for the Environmental Report.

The provision of a Scoping Report to consultees is recommended as good practice as it can inform stakeholders about the key environmental issues and the key elements of the Plan or Programme. In addition, the Scoping Report can be used as a tool to generate comments from stakeholders on the scope and approach of the SEA.

The SEA Scoping Report for the Plan was circulated to the statutory consultees in England, Scotland and Wales in April 2025, as detailed further in Section **Error! Reference source not found.** of this SEA Statement.



2.4 SEA Environmental Report

An SEA Environmental Report was completed, which detailed the environmental assessments undertaken on the HND Implementation Plan. The preparation of an Environmental Report on the likely significant effects on the environment of the Plan included consideration of:

- Baseline data relating to the current state of the environment;
- Links between the HND Implementation Plan and other relevant Strategies, Policies, Plans, Programmes and their Environmental Protection Objectives;
- Key environmental issues within the geographic regions covered by the HND Implementation Plan;
- Alternatives available;
- The likely significant positive and negative effects of a number of reasonable alternatives on the environment;
- Measures envisaged for the prevention, reduction and mitigation of any significant adverse effects; and
- Monitoring measures to ensure that positive and negative environmental effects will be identified, allowing for appropriate remedial action to be taken if necessary.

2.5 Consultations

The SEA Scoping Report for the HND Implementation Plan was circulated in April 2025 to the statutory consultation bodies in England, Scotland and Wales, as follows:

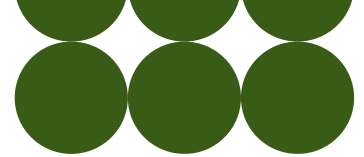
The statutory consultees for SEA in England were consulted:

- Natural England (NE)
- Historic England (HE)
- Environment Agency (EA)

The statutory consultees for SEA in Scotland were consulted:

- Scottish Government
- Scottish Environmental Protection Agency (SEPA)
- NatureScot
- Historic Environment Scotland (HES)

The statutory consultees for SEA in Wales were consulted:



- Cadw (Welsh Historic Monuments)
- Natural Resources Wales (NRW)
- Welsh Government

These statutory consultees were formally consulted upon as part of the scoping of the SEA for the HND Implementation Plan. The Joint Nature Conservation Committee (JNCC) was also consulted as a statutory consultee for SEA in English, Scottish and Welsh offshore waters.

The HND Central Design Group Environmental sub-group (ESG) members, who were continuously involved in the development of the Offshore Coordination design exercises, were also contacted with this scoping information, the members of which are detailed in Section 4.2.

All comments and submissions received were logged, reviewed and, where considered to be relevant or appropriate, applied to the HND Implementation Plan and SEA, HRA and MCZ processes.

Consultations on the draft HND Implementation Plan, SEA Environmental Report, HRA Report and MCZ Report commenced in November 2025 and ran for 13 weeks until January 2026. These documents were available for viewing digitally via the NESO website:

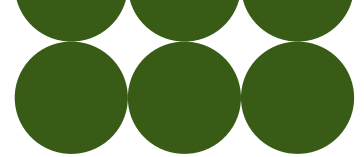
<https://www.neso.energy/about/our-projects/offshore-coordination>

All responses received during this consultation phase, and any subsequent action taken, are summarised in Section **Error! Reference source not found.**, and further detailed in Appendix A of this SEA Statement.

2.6 Habitats Regulations Assessment

In addition to the SEA process, and in accordance with the Conservation of Habitats and Species Regulations 2017 as amended (England and Wales and their inshore waters), the Conservation (Natural Habitats, &c) Regulations 1994 (Scotland on land and within inshore waters), and The Conservation of Offshore Marine Habitats and Species Regulations 2017 (UK offshore waters), the potential for the HND Implementation Plan to impact on designated European sites was assessed. The Regulations require that any proposed Plan or Project that has potential to result in a likely significant effect on a designated European site, known as National Site Network site (including Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites), will require an Appropriate Assessment (AA).

HRA for the HND Implementation Plan was carried out in parallel with the SEA process. The HRA process included Stage 1 assessment of potential likely significant effects and Stage 2 AA of the potential for Adverse Effects on Site Integrity (AEoSI) of European sites. A derogation report was also produced, indicating the process and outcomes for the derogation test identified as being necessary as part of the AA for the HND



Implementation Plan in relation to the potential for AEoSI for four identified route corridors of the Recommended Design.

The outcomes of the HRA Report and Derogation Report were integrated into the SEA Environmental Report.

2.7 Marine Conservation Zone Assessment

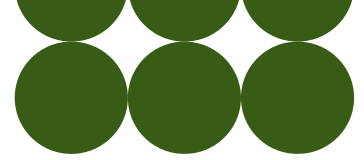
National Grid Electricity System Operator (NG ESO) (now NESO) commissioned a Plan level MCZ assessment to accompany the HRA. Specific consideration of the potential for effects to occur on MCZs in English, Welsh, and Northern Irish waters; and Nature Conservation Marine Protected Areas (NCMPAs) in Scottish waters, is required as part of marine licence applications, as set out in Section 126 of the Marine and Coastal Access Act 2009.

A Stage 1 MCZ Report considered the potential for adverse effects on MCZs, as well as Highly Protected Marine Areas (HPMAs) and Scottish NCMPAs. This determined whether the HND Implementation Plan is capable of affecting (other than insignificantly) the protected features of an MCZ and/or any ecological or geomorphological process on which the conservation of any protected features of an MCZ is (wholly or in part) dependent. The Stage 1 assessment identified eight route corridors of the Recommended Design that had potential to hinder the conservation objectives of an MCZ, HPMA or NCMPA, despite the implementation of best practice mitigation measures. A Stage 2 Assessment was therefore completed for these identified route corridors. The Stage 2 MCZ Report concluded that other means of proceeding (OMP) could be identified for all eight study corridors that are considered reasonably feasible.

The outcomes of the MCZ Reports were integrated into the SEA Environmental Report.

2.8 SEA Statement

The main purpose of this SEA Statement is to provide information on the decision-making process for the HND Implementation Plan in order to illustrate how decisions were taken and used to make the development process more transparent. In doing so, the SEA Statement documents how the recommendations of both the SEA Environmental Report, the HRA Report and the MCZ Report, as well as the views of the statutory consultees and other submissions received during consultation, have influenced the preparation of the HND Implementation Plan. It further provides information on the arrangements put in place for monitoring the implementation of the HND Implementation Plan following its finalisation. The SEA Statement is available to the public, along with the adopted HND Implementation Plan.



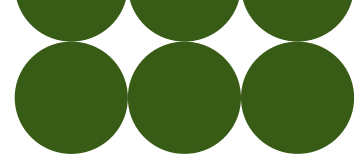
2.9 Adoption of the HND Implementation Plan

Following the public and statutory consultation on the draft HND Implementation Plan and associated environmental reports, the final HND Implementation Plan was then provided to the Secretary of State (SoS), DESNZ for approval. The final HND Implementation Plan was adopted on 7 September 2026. This, along with the SEA Environmental Report and SEA Statement, will be used for the purpose of informing further studies and the detailed design of the proposals within the HND Implementation Plan.

3. How the Environmental Report has been taken into account in the Plan

- 3.1 Development of the HND Implementation Plan
- 3.2 Assessment approach and Strategic Environmental Objectives
- 3.3 Recommended Mitigation





3.1 Development of the HND Implementation Plan

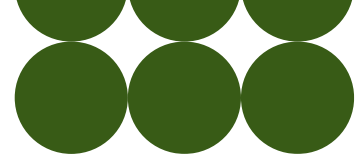
Holistic network design recognises that one of the challenges to delivering the ambition for offshore wind deployment in the timescales required will be making sure that the offshore and onshore transmission network enables this growth in a way that is efficient for consumers and takes account of the impacts on communities and the environment. The HND Implementation Plan combines the cumulative offshore network design recommendations, and approved variations to the initial HND and HNDFUE offshore designs. The objective of the four design processes comprising the network design process, namely HND, HNDFUE: ScotWind, HNDFUE: Celtic Sea, and HNDFUE: INTOG, was to provide a set of network design recommendations to facilitate the connection of in-scope future offshore wind in Great Britain's (GB's) waters.

The environment was considered throughout the early design and assessment stages, with the four network design objectives of 'Economic and efficient', 'Deliverability and operability', 'Environmental impact', and 'Local community impact' considered on an equal footing in the determination of a Recommended Design for each design process. As part of the overall HND and HNDFUE design methodology, an assessment was undertaken of environmental and social constraints to offshore cabling (cabling from the proposed offshore wind farm site to the proposed interface point on the onshore grid) to inform the development of recommended network design options. This aimed to robustly implement the established mitigation strategy of Avoid, Reduce, Mitigate; with a strong focus on Avoid and Reduce applied during the early stages of the overall methodology, with mitigation only considered at a strategic level, where required, in the final options appraisal.

The environmental and community constraints indicators that were used in the development and early assessment of designs reflected and represented the environmental topics that are considered through SEA, recognising the potential impacts of cabling operations and the key areas and/or features that should be avoided, and in this manner the important environmental factors influenced the design development for route corridors and options.

3.2 Assessment approach and Strategic Environmental Objectives

Assessment of the HND Implementation Plan comprised an assessment of the baseline environmental information available against the high-level objectives and potential issues. This method involved an assessment for potential effects on the following SEA topics:



- Biodiversity, Flora and Fauna (BFF);
- Population and Human Health (PHH);
- Geology, Soils and Land Use (GSL);
- Water (W);
- Air (A);
- Climatic Factors (CF);
- Material Assets and Infrastructure (MA);
- Cultural, Architectural and Archaeological Heritage (CH);
- Landscape, Seascape and Visual Amenity (L).

The purpose of this was to predict and evaluate, as far as possible, the environmental effects of the HND Implementation Plan, highlighting any significant environmental problems and/or benefits that are likely to arise from its implementation.

The assessment of recommended designs was informed by the non-spatial environmental assessment provided in Section 8 of the SEA Environmental Report. To simplify the assessment process and avoid repetition during the assessment of each proposal, the types and severity of high-level impacts that cabling (i.e., offshore cabling and onshore underground cabling) and onshore infrastructure development (substations and converter stations) can have on sensitive features within each SEA topic were considered. These potential impacts were described based on the experience of the SEA Team, and from a review of SEA reports from several related plans (the UK Offshore Energy SEA 4 (OSEA4), the UK Offshore Energy SEA 3 (OSEA3); the Northern Ireland Offshore Renewable Energy Action Plan (OREAP) SEA; the Scottish Sectoral Marine Plan for Offshore Wind Energy and SEA (2019), the Scottish draft Sectoral Marine Plans for wave and tidal energy (2013); Planning Scotland's Seas: SEA of Plans for Wind, Wave and Tidal Power in Scottish Marine Waters (2013); the Scottish draft Updated Sectoral Marine Plan for Offshore Wind Energy 2025; relevant reports including 'Nature Conservation Considerations and Environmental Best Practice for subsea cables for English Inshore and UK Offshore waters' (NE/JNCC 2022), 'Marine cabling activities in Wales: information to support environmental assessment' (NRW, 2025), OSPAR published guidelines and assessment of cable impacts, EIRGRID evidence-based studies for impacts of cables, Taormina et al. (2018); and a comprehensive review of 168 EIA reports associated with offshore renewable energy projects in UK waters.

Assessment of the Recommended Designs of the HND Implementation Plan was relatively strategic, with the aim of reporting likely impacts at the national and regional level to reflect the scale at which the strategic Recommended Designs and constituent route corridors have been identified. For each of the four HND/HNDFUE work strands, the potential main issues and impacts were detailed by environmental topic area.

The Recommended Designs of the HND Implementation Plan were assessed in terms of their potential effects, and the significance of these effects, on the environment against a set of strategic environmental objectives (SEOs). These SEOs were developed in the



context of broader environmental protection objectives set at both international and national levels and also took into account the context of potential for impacts associated with the HND Implementation Plan. Each of the environmental topics described in Section 3 of the SEA Environmental Report were assigned at least one high-level SEO, specifying a desired outcome, against which the Recommended Designs set out in the HND Implementation Plan were assessed. Each high-level SEO was paired with a specific target(s), as well as indicator(s) that can be used to measure the progress towards achievement of these targets. These SEOs, Indicators and Targets are given in **Table 2**.

The assessment examined the likely significant effects of the Recommended Designs set out by the HND Implementation Plan, and how their realisation could contribute to achieving these SEOs. The potential for development within each Recommended Design area to have effects on SEA topics and SEOs, was assessed in the short, medium and long-term for likely effects, the significance of the effects, and whether they are positive or negative effects. Other impacts assessed for significance were secondary effects, cumulative effects, synergistic effects, temporary and permanent effects, and the inter-relationship of effects.

All potential positive and negative impacts were presented individually, with a text description, and then a summary graphic. In addition, a summary of the overall balanced potential effect was presented for each environmental issue area. Scores were assigned to impacts, ranging from +3 to -3 as demonstrated in **Table 3**. The purpose of adding numerical scores was to assist in the comparison of options. Like the assessment, the scores demonstrated both the positives and the negatives and were not conveyed in terms of net benefit or net loss, which can sometimes be misleading. The scoring took into account the sensitivity of receptors and professional opinion and was linked to the potential high-level impacts identified and the baseline environment. The scoring system was intended as a guide to show how the assessment considers the full source-pathway-receptor and professional opinion, any considerations on recoverability of receptors should be considered at an individual project level rather than the strategic Plan stage.

SEA Objectives

SEA Topic	Objective	Objective Description	Indicators	Targets
Biodiversity, Flora and Fauna	Avoid damage to, and where possible enhance, biodiversity, flora and fauna.	Preserve, protect, maintain and, where possible, enhance biodiversity and ecosystems within UK marine and coastal areas,	Conservation status of designated habitats and species within international and national designated sites (e.g., SACs, SPAs, Ramsar sites,	No negative change, or a positive change, in the conservation status of designated habitats and species within international, and national



SEA Topic	Objective	Objective Description	Indicators	Targets
		including internationally, nationally, and locally protected sites, habitats and species, and other known species of conservation concern. Preserve, protect, maintain and enhance the connectivity between sites and ecosystems.	MCZs, NCMPAs, SSSIs). Status of protected and priority habitats and species (e.g., Annex habitats and species, priority habitats and species). Areas of known importance for flora and fauna (e.g., fish spawning and nursery grounds, RSPB Reserves, NRW habitats sensitive to cabling).	designated sites. No negative change, or a positive change, in the status of protected or priority species and habitats outside designated sites. Avoid areas of known importance for flora and fauna.
Population and Human Health	Minimise disruption to the local population, and adverse effects on human health and wellbeing, while maximizing potential benefit to the population.	Avoid adverse effects on human health and safety and minimise disruption to the local population, and displacement of recreational and leisure use of the area, while supporting transition from fossil fuel use through delivery of a new secure renewable	Population centres in proximity to onshore routes. Areas of higher deprivation in proximity to onshore routes. Use of the area by recreational and leisure users (e.g., RYA areas, Bathing waters) and status of these areas, where applicable. Potential to support new	Delivery of cables and associated infrastructure with minimal adverse nuisance to communities, including in areas of higher deprivation. Minimise the risk to, or displacement of, recreational and leisure users of the area. No negative change, or a positive change,

SEA Topic	Objective	Objective Description	Indicators	Targets
		energy supply for the GB population, with potential employment and other benefit opportunities.	renewable energy supply for the GB population, with potential employment and other benefit opportunities.	in the status of Bathing Waters. Facilitation of renewable energy infrastructure that supports a transition away from fossil fuel use and maximises the potential benefits to the population.
Geology, Soils and Land use	Minimise damage to the function and quality of the seabed, and avoid significant damage to, or loss of, sensitive onshore land and soils.	Preserve, protect, maintain and, where possible, enhance, sites designated for geological or geomorphological features, and minimize direct and indirect damage to the function and quality of the seabed and sensitive onshore land and soils.	Site condition/status of protected geological/geomorphological features within designated sites (WHSSs, MCZs/Historic MPAs, SSSIs, UNESCO Geoparks). Interaction with known areas of potential contamination (e.g., MoD live firing areas, munition disposal areas, unexploded ordnance (UXO), dumping grounds offshore). Potential scale of loss or	No negative change, or a positive change, in the condition of protected geological/geomorphological features within designated sites. Minimise potential interaction with areas of potentially contaminated sediments. Minimise potential loss or alteration to seabed geology and sediments. Minimise potential loss of sensitive land and soils including high-

SEA Topic	Objective	Objective Description	Indicators	Targets
			alteration to seabed geology and sediments. Potential scale of loss of soil resource including high-quality agricultural lands and peatlands or other carbon-rich soils.	quality agricultural lands, peatlands and other carbon-rich soils and where possible enhance these areas.
Water	Avoid impacts on the status or quality of water bodies and avoid interaction with areas of flood risk.	Support the objectives of the WFD and MS (Marine Strategy) by avoiding damage to or deterioration of water status, quality and resource and support the objectives of the Floods Directive by avoiding interactions with national flood zones.	Status of WFD water bodies and protected areas (Bathing Waters, Shellfish Waters) interacting with offshore and onshore routes. MS Environmental status of marine area (e.g., Descriptor 5, 8, 9, 10, 11). Interaction with known areas of potential contamination offshore (e.g., MoD live firing areas, munition disposal areas, UXO, dumping grounds). Potential for impacts on water quality	No negative change in the status of WFD water bodies, and protected areas. No negative change in the Environmental status of MS Descriptors. Minimise potential interaction with areas of potentially contaminated sediments. Minimise the potential for impacts on water quality during construction. Minimise potential interaction with

SEA Topic	Objective	Objective Description	Indicators	Targets
			during construction.	areas of known flood risk.
			Interaction with areas of known flood risk (national flood zones).	
Air	Minimise risk to local air quality and contribute to improving national emissions.	Minimise risk to local air quality and contribute to improving national pollutant emissions.	Sensitive receptors in proximity to routes (e.g., population centres onshore, areas of high recreational/leisure use offshore). Interaction with areas of known air quality issues onshore (e.g., Air Quality Management Areas) Capacity to support new renewable energy connection, with potential effects on pollutant reduction.	Minimise the potential for negative effects on air quality from vessel emissions and onshore emissions. Avoid interaction with areas of known air quality issues onshore. Facilitation of renewable energy infrastructure that supports a transition away from fossil fuel use and maximises the potential for a reduction in air pollutant emissions.
Climatic Factors	Avoid impacts on carbon stocks and potential while contributing to a reduction in	Minimise loss of carbon sequestering seabed and terrestrial carbon sinks while contributing to	Interaction with areas of known or potential blue carbon habitats. Interaction with onshore habitats that	Minimise the potential for loss of known blue carbon habitat. Minimise the potential for loss of onshore



SEA Topic	Objective	Objective Description	Indicators	Targets
	GHG emissions.	a reduction in GHG emissions from the energy supply sector in line with national commitments.	are carbon sinks (peatlands, forests). Capacity to support new renewable energy connection, with potential effects on GHG reduction.	habitats that function as carbon sinks. Facilitation of new renewable energy infrastructure that maximises the potential for a reduction of GHG emissions in line with emission reduction targets.
Material Assets and Infrastructure	Minimise disruption to other assets and infrastructure while providing robust new renewable energy infrastructure.	Provide robust new renewable energy infrastructure while minimising disruption to other assets and infrastructure.	Presence of offshore and onshore coastal infrastructure (e.g., cables, pipelines, roads, WWTWs). Interaction with other users of the marine area (shipping, fisheries and Shellfish Waters, military, aviation, dredging sites). Potential capacity of new renewable energy infrastructure facilitated.	Minimise the potential for loss or damage to other marine, coastal, and onshore infrastructure. Minimise the risk to, or displacement of, other users of the area (fisheries and aquaculture, shipping, military activities, aviation, dredging sites). Facilitation of new renewable energy infrastructure that maximises the potential energy output in



SEA Topic	Objective	Objective Description	Indicators	Targets
				line with government targets to decarbonise the power system by 2030.
Cultural, Architectural and Archaeological Heritage	Protect, conserve, and where possible enhance designated and non-designated heritage assets and their settings.	Protect international, national and local heritage designations, and non-designated heritage assets, and their settings.	Interaction with known designated / non-designated marine heritage features/sites (e.g., protected wrecks, Historic MPAs). Interaction with known designated / non-designated coastal archaeological or architectural heritage features (e.g., listed buildings, scheduled monuments). Potential to contribute to archaeological knowledge through surveys and actions.	Avoid or minimise the potential for effects on known designated marine heritage features/sites. Minimise the potential for effects on known heritage features and their setting in development and operation of onshore infrastructure. Potential for gaining new knowledge to inform subsequent decision-making.
Landscape, Seascape and Visual Amenity	Protect, and where possible enhance, the landscape and seascape character and visual amenity	Protect and where possible enhance the landscape and seascape character and visual amenity	Potential for effects on visually sensitive designated areas (e.g., National Landscapes, WHSs).	No long-term negative change, or a positive change, to areas designated for landscape.



SEA Topic	Objective	Objective Description	Indicators	Targets
	of the GB shoreline.	of the GB shoreline.	Population centres in proximity to onshore routes.	Delivery of cabling and associated onshore infrastructure with minimal adverse visual effects to communities.

Table 2: Strategic Environmental Objectives, Indicators and Targets

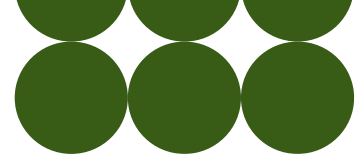
SEA Effects Scoring

Score	Description
+3	Significant positive environmental effects
+2	Moderate positive environmental effects
+1	Slight positive environmental effects
0	No environmental effects
-1	Slight negative environmental effects
-2	Moderate negative environmental effects
-3	Significant negative environmental effects

Table 3: Description of SEA environmental impact scores

3.3 Recommended mitigation

Following the environmental assessment of the HND Implementation Plan, environmental mitigation measures were recommended where potential negative effects on environmental topic areas were identified from implementation of the HND Implementation Plan. The mitigation proposed was broken down into 'General Mitigation', 'Mitigation by Environmental Effect', 'HRA Mitigation', and 'MCZ Mitigation', as outlined below. These measures were detailed in Section 10.1 of the SEA Environmental Report.



The HND Implementation Plan provides a summary of the outcomes of the environmental assessments. It states that the aim at Plan-level is to offer a potential solution for future development and explore the availability of project-level mitigations. It notes that each individual project will seek the required consents to construct and operate all aspects of their project and that it is at this stage that the mitigation of impact is explored in more detail.

3.3.1 SEA Mitigation

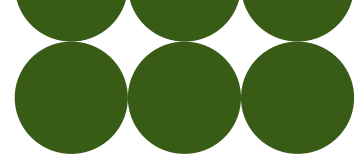
3.3.1.1 General Mitigation

The iterative development of the HND Implementation Plan and SEA, involving the mapping and modelling of constraints, including environmental constraints, and review and refinement in consultation with key stakeholders, has helped to focus the Plan through the identification of lower constrained areas that can avoid the areas of highest environmental risk. This has included the application of the mitigation hierarchy with regards to Biodiversity, Flora and Fauna of avoid, minimise, restore and compensate, which should be adhered to at the individual project level. All potential negative impacts should aim to be avoided where possible; if this cannot occur, appropriate and specific mitigation measures must be implemented relevant to the potential impacts, which should underpin restoration aims alongside any biodiversity net gains. If there are remaining impacts which cannot be avoided or mitigated against, compensation measures may be required by SNCBs, with strategic consideration as to the most appropriate type and location of any appropriate compensation, aligned with wider species and habitat conservation strategies. Such compensatory measures may be variable in their nature and should be picked appropriately according to the specific species and habitats impacted, but may include the creation of new habitats, nesting locations, wider habitat restoration efforts, efforts to remove existing marine pollution, predator management, or supplementary feeding. The measures should be designed to focus on the ecological features as well as geological/geomorphological features with an aim to restoration to an equivalent or greater level of ecological function (Parker et al., 2025a). Consideration should be given to the potential for the effects of climate upon identified impacts (e.g., alterations to cable exposure through changing wave and sediment regimes which may lead to indirect impacts on seabed habitats and/or species, and water quality) and how this should be considered within implemented mitigation measures.

The principal SEA mitigation recommendation is that the predicted negative effects on the environment, identified in this report, should be considered further during the next stage of planning, refinement, and design for projects, when the specifics of the development infrastructure options and cabling routes can be optimised through detailed feasibility studies and design in order to limit identified impacts on sensitive receptors.

Existing marine infrastructure should be avoided, where possible, or planned to minimise the number of cable crossings and rock deposits required for cable and pipeline crossings, particularly within MPAs.

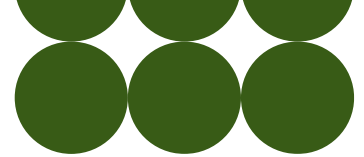
Areas were identified in the SEA Environmental Report where independent projects associated with implementation of the HND Implementation Plan could interact with each



other, or with other planned infrastructure, during construction and/or long-term operation. Areas were also identified where there is a greater potential for in-combination or cumulative negative effects to be considered at this strategic stage due to a concentration of cables, potential bottlenecks, the need to avoid designations and other environmental sensitivities, and the fact that these issues would need to be taken into account at the detailed project planning and design stage. To minimise the potential environmental and navigational adverse effects, including minimisation of the cumulative footprint and disturbance, cable routing and protection strategies should be coordinated between developers, transmission owners/operators and other seabed users, including active consideration of shared cable protection and joint corridor-management arrangements.

At the project planning stage, further environmental studies based on the more detailed designs and construction methodologies should be undertaken as appropriate. These studies may involve, but are not limited to, marine and terrestrial ecology surveys, marine and terrestrial mammal surveys, ornithological and bat surveys, fish surveys, seascape, landscape and visual impact assessments, MCZ assessments, WFD assessments, geotechnical investigations and heritage surveys. Further Appropriate Assessment, to meet the requirements of the Habitats Directive, for the detailed designs and construction methodologies will be required at the project level, where potential impacts have been identified in the SEA and accompanying HRA Report for the HND Implementation Plan. Reference should be given to Parker et al. (2025a) with regards to the specific standards and processes to be undertaken for the collection of data for offshore developments. Data gathering for baseline characterisation will consist of a desk-based study using existing dataset gathering to assess population abundance and density for marine mammals and birds and provide information on benthic habitats, followed by site-specific surveys of which the survey type, timing and equipment used should be informed by any previous data gathering to ensure full data coverage and consultations on data evidence gaps in combination with statutory nature conservation bodies (SNCBs)/other relevant groups. Datasets of relevance for marine mammals should include, but not be limited to, SCANS IV surveys, the Marine Mammal Management Units, and previous surveys (see The Joint Cetacean Data Programme) in the relevant areas. Digital aerial surveys for marine mammals and birds as well as underwater imagery for fish and benthic surveys can provide a permanent record of observations. Further details in specific survey methods, sampling approach, design and appropriate variables of interest and best practice for baseline characterisation surveys are provided in Parker et al. (2025b). Where suitable, non-UK populations should be included in assessments where there has been an assessment determined of sufficient connectivity, information should be presented both with and without these additional non-UK populations (Parker et al., 2025c). Best practice recommended by NE and JNCC includes submitting all survey data to the Marine Data Exchange.

Before any works are carried out, detailed method statements and management plans (construction and environmental) should be prepared, detailing timing of works, information on the specific mitigation measures to be employed for each works area, and mechanisms for ensuring compliance with environmental legislation and statutory consents. At the project level, this should include considerations on any new emerging

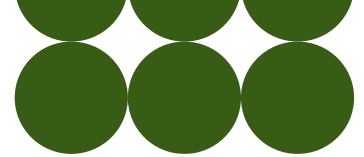


technologies and the most up-to-date guidance, including the Reducing Marine Noise Policy Paper (DEFRA, 2025) and the Marine Environment: unexploded ordnance Joint Position Statement Policy Paper (UK GOV, 2025).

Contractors should be required to prepare Construction Environmental Management Plans (CEMPs), which would include a requirement for related plans to be prepared, as appropriate, for project implementation, such as Erosion and Sediment Control, Invasive Species Management, Emergency Response, Traffic and Safety Management, Dust and Noise Minimisation, and Stakeholder Communication Plans. It should also be noted that large parts of England are affected by water scarcity issues and the potential for construction works to impact on water availability and potential for over-abstraction to impact on habitat conditions, water availability and timing of construction works should be considered at the project level such as using water resource management plans to determine where water resources are constrained. Works should only be carried out once the method statements have been agreed with competent authorities. Construction method statements should be agreed prior to the commencement of licenced activities under a Marine Licence.

In line with the mitigation hierarchy, designated sites should be avoided in the first instance. If this is not possible then all efforts should be made to avoid sensitive features within the sites as a priority. Following that, mitigation measures should be used to reduce the impact on designated features as much as possible. Further mitigation of impacts can be realised where burial is achievable and likely to remain buried throughout the lifetime of the cable and crossings are minimised. Given predicted climate change and potential acceleration of this, there should be careful consideration of future physical environmental conditions when considering cable burial requirements, particularly in areas with mobile seabed features. Projects may be subject to further Appropriate Assessment where potential impacts have been identified in this SEA and accompanying HRA Report. Where there may be unavoidable impacts on protected habitats and/or species the necessary derogation licences should be applied for prior to seeking planning permission or approval for a project. Consultation should also be undertaken with appropriate SNCBs as well as following government guidance and information such as that published by JNCC, Natural England and MD-LOT, this can include information relating specifically to designate sites as published under JNCC Advice on Operations Guidance (JNCC, 2018) which details relevant site plans and any specific conservation advice. This provides information for various marine activities and provides a sensitivity score for the protected features for each activity and pressure combination. If an activity is not listed which is suitable to represent the proposed development, contact should be made with JNCC for further advice following project level assessment. JNCC have developed a Pressures-Activities Database for UK inshore and offshore waters which has assessed the evidence base for 112 marine-based human activities and their associated pressure impacts based on OSPAR. This should be consulted in association with any designated site information to consider potential pressure activities and impacts arising from development at the project level (JNCC Marine Pressures-Activities Database).

Marine construction work generally has the greatest potential for negative impacts during spawning/breeding and early nursery periods for aquatic and marine protected species.



Mitigation should be determined following an assessment of the potential impacts of a project, and mitigation may include avoidance or modification of work during sensitive periods. Consultation should be undertaken with the appropriate authorities in this regard.

Monitoring of project-level mitigation measures may differ between industries and projects and should be undertaken as agreed with the relevant regulators and SNCBs to ensure effectiveness. Where possible, and in consultation with the relevant regulators and SNCBs, monitoring plans should be flexible in design to consider new technologies as well as focus on acting with strategic level monitoring for collaboration purposes of any data collection and sharing best practice information (Parker et al., 2025d).

All works and planning of works should be undertaken with regard to all relevant legislation, licensing and consent requirements, and recommended best practice guidelines. An ecological clerk of works should be appointed for environmental management of each development, and where specific sensitive species may be impacted, an appropriate expert should also be appointed.

Biodiversity restoration and enhancement opportunities should be factored into the implementation of development projects, wherever possible. At a project-level, Biodiversity Net Gain (BNG) and marine restoration opportunities in advance of Marine Net Gain (MNG) being implemented should be considered where possible, the degree of net gain will depend on the specific area and its associated impacted habitats and species. Following cable installation and associated in-filling, it is likely that a degree of habitat restoration will occur naturally, potential BNG or marine restoration should aim to enhance and maximise this restoration.

The timing of construction and maintenance works should be planned to avoid any potential for negative cumulative impacts or inter-relationships with other schemes, plans or projects, yet look to optimise any potential positive cumulative impacts or inter-relationships. Activities should be coordinated temporally, where possible, where these may affect sensitive receptors e.g., coordinated planning of noisy activities such as UXO or seismic surveys to ensure that noise thresholds for SACs designated for Harbour porpoise are not exceeded.

The UK Government aims to reduce marine noise under pledges and commitments made in the Marine Strategy Regulations 2010 and the UK Marine Strategy. Given the large numbers of UXO present in the marine environment following both World Wars, there is potential for marine developments to encounter these, previously clearance of UXO has occurred using high order detonation. However, emerging technologies have allowed for low noise order clearance through deflagration which will burn the UXO explosive material, this has been outlined in the Joint Position Statement from the UK Government, devolved governments and relevant statutory bodies of the Marine Environment: unexploded ordnance clearance (UK GOV, 2025). This will reduce any resulting blast and reduce associated impacts from high order clearance such as seabed damage and injury/disturbance on marine species new methods. High order clearance methods should be used as a last resort for situations where low noise order clearance has failed, or where expert opinion is that the UXO is not a suitable candidate for all known low order technologies due to degradation of the UXO and/or prohibitive environmental conditions,



in line with the Joint Position Statement of the Marine environment: unexploded ordnance clearance (UK GOV, 2025).

Mitigation should consider both marine mammals as outlined in JNCC guidelines for minimising the risk of injury to marine mammals from unexploded ordnance (UXO) clearance in the marine environment (JNCC, 2025) list a series of mitigation measures that should be considered as a minimum where there is potential for explosive clearance as well as benthic habitats. Considerations for mitigation regarding areas near designated sites should be on a case-by-case basis with consultations with appropriate regulators and SNCBs. Elsewhere, standard mitigation measures should be used as outlined in JNCC (2025) guidelines on minimising the risk to marine mammals from UXO, such as mitigation zones, which should be determined as the full extent within which auditory injury may occur or within a 1km radius, whichever is larger. UXO clearance should take place during daylight, employ at least two Marine Mammal Observers and a pre-clearance visual search of the area must be undertaken at least 1 hour prior to the clearance. Where applicable PAM (Passive Acoustic Monitoring) and ADD (Acoustic Deterrent Devices) may be used with regard to the use of Effective Deterrence Ranges (EDRs) for particular species to help inform disturbance distances. Marine mammal detection will require a delay to clearance for suitable times to allow the marine mammals to leave the area and visual monitoring should continue during clearance and for at least 15 minutes after clearance to determine any potential impacts to marine life such as injury or death. Further research is required for the potential for chemical contamination following UXO clearance from low order clearance methods of deflagration due to the potential for leakage of explosive materials which are not fully burned or from the release of chemicals during the burn process, therefore recovery of any potential seafloor debris should be considered best practice to mitigate the risk.

3.3.1.2 Mitigation by Environmental Effect

Table 4 provides environmental effect specific mitigation measures that should be considered at the project stage development of the Recommended Designs from the HND Implementation Plan to minimise the potential for any negative effects on the wider environment. These mitigation measures should be considered and adopted, where relevant, through the next stages of more detailed design/feasibility and project level study. Mitigation measures detailed at this strategic Plan level should be considered at the individual project level, depending upon the specific sensitivities, receptors and pathways impacted by development, which will be informed by project level assessments. The implementation of any such mitigation measures must be appropriate and feasible to the specific project.

SEA Mitigation Measures

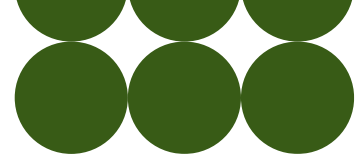
SEA Topic	Potential Impact	Proposed Mitigation
Biodiversity, Flora	Offshore Cabling	
	Impacts on designated sites	Mitigation during the project planning phase to avoid designated areas for development. Screening for Likely

SEA Topic	Potential Impact	Proposed Mitigation
and Fauna		Significant Effects where European Sites may be affected, with appropriate assessment undertaken where Likely Significant Effects are identified. All potential projects must ensure compliance with the requirements of the Habitats Regulations and Offshore Habitats Regulations (further mitigation is given in Table 5 for European Sites). It is recommended that MCZ assessments should also be undertaken at the project-level where applicable. If designated sites cannot be avoided, suitable mitigation steps should be chosen.
	Direct damage to benthic habitats and species from preparation of cable routes. Including potential for damage to shellfish or supporting fish species habitats.	Mitigation during the project planning phase through the avoidance of areas of benthic ecological importance, particularly areas where protected habitats and species are present. Where possible, the original sediment/habitats should be reinstated to facilitate natural restoration and habitat recolonisation as well as promote BNG and voluntary marine restoration opportunities in advance of MNG or Marine Net Benefit (in Wales) being implemented. Consideration should be given at the project level to mitigation that reduces impacts within periods of vulnerable life stages such as annual migrations or known spawning periods.
	Direct loss of benthic habitats and sedentary species in footprints of hard cable protection. Including potential for long-term loss of shellfish habitats and supporting fish species habitats e.g., spawning, foraging and nursery grounds, or damage to supporting habitats for other marine species. Indirect loss of benthic habitat through scour around cable protection during operation.	Project planning mitigation should aim for cable installation in areas where non-sensitive habitats or species are present. Determining the use of compensatory measures should follow the mitigation hierarchy to reduce and mitigate prior to consideration of compensation. Such measures may include microsinning, placement of rock protection utilising a fallpipe (for more accurate placement), utilising backfill material that is similar to the existing substrate, techniques that improve burial success, design slope of berm to facilitate migration etc. Where appropriate, project mitigation measures may consider the creation of compensatory habitats for areas that are lost e.g., within inter-tidal areas, or the use of habitat enhancement such as developing population aggregation and refuge habitat areas, within the project planning phase. Additional data sources should be consulted, as appropriate to the project area e.g., for the Celtic Sea area, outputs from the PELTIC surveys conducted by Cefas and spawning and nursery grounds as reported by Campanella & van der Kooij (2021).

SEA Topic	Potential Impact	Proposed Mitigation
		During project planning, the volume of rock used for cable armouring should be planned as the minimum required (based on the worst-case scenario) to ensure appropriate cable protection, whilst minimising habitat loss. This should also be a consideration at decommissioning. Where installation may be within a site where byelaws for fisheries are in place prohibiting bottom towed gear, rock protection may not be required. All potential projects must ensure compliance with the requirements of the Habitats Regulations and Offshore Habitats Regulations, and the Marine and Coastal Access Act 2009. The appropriate statutory nature conservation body should be consulted where supporting habitats of designated species could be adversely affected (damage, destruction or obstruction to habitats required for shelter or protection of species protected by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) is an offence; where impact cannot be avoided or mitigated, a licence may be required for operations).
	Indirect loss or damage to sensitive habitats and species in the vicinity of cable routes e.g., due to release of sediments (including contaminated sediments). Including potential for short-term indirect damage or smothering of shellfish habitats or fish spawning grounds, or alteration of foraging or social behaviours due to turbidity.	As above, project planning mitigation should aim for installation in areas where non-sensitive habitats or species are present. Areas of known potential contamination should be avoided. Risks to habitats and species should be avoided or minimised through project design and adoption of appropriate mitigation measures, such as careful route selection and use of suitable installation techniques. Mitigation during the project planning phase to avoid (or implement timing restrictions for) areas that may generate increased levels of suspended sediment (or use less disruptive cable installation methods e.g., plough installation) that coincide with areas of fish spawning grounds or sensitive species. Mitigation during the project planning phase could include suitable modelling of hydrodynamic and sediment transport processes. Information on sediment transport pathways will require further detail at the project level to assess potential effects and determine suitable mitigation to minimise effects within construction areas. Consideration should be given at the project level to mitigation that reduces impacts within periods of vulnerable life stages such as annual migrations or known spawning periods.

SEA Topic	Potential Impact	Proposed Mitigation
		All such measures will be captured in project specific implementation plans – such as CEMPs, and subject to regulatory compliance. Where cable routes are proposed in proximity, coordination of cable routing, and protection is recommended between developers/operators to reduce the potential for cumulative effects.
	Effects of colonisation of hard cable protection material: potential for long-term community alterations. Direct loss of benthic habitats and species if colonised cable protection material is removed at decommissioning.	Mitigation during the project planning phase should consider how potential alterations in community structure may impact wider ecosystem functioning and communities. Ecological survey work to inform project planning, and appropriate communication with environmental consultees. Measures to mitigate this impact may include utilising similar substrate to the surrounding area and adopting Invasive Non-Native Species (INNS) biosecurity best practice. Mitigation measures during the project planning phase should consider the decommissioning activities that will be used, and whether removal of cable protection material or cables themselves is required or could result in additional habitat loss (that from pre-construction and decommissioning periods). This will require a consideration of the lifecycles of materials used and the overall potential for degradation/release of toxic compounds.
	Introduction of non-native/invasive species.	At the project planning phase, pre- and post-construction surveys for invasive/non-native species should be undertaken in areas of known risk and, if found to be present, an Invasive Species Management Plan should be prepared and a Code of Good Practice, which outlines controls and/or removal measures to ensure that species are not spread during the project's construction or operation. Developers should be aware of the potential for offences in this regard under the Wildlife and Countryside Act 1981 (as amended). Introduction of non-native species from vessels during construction, operation, and decommissioning should be mitigated through adherence to the objectives of the International Maritime Organisation (IMO) International Convention for the Control and Management of Ships' Ballast Water and Sediments, which requires all ships to use a Ballast Water Management Plan, have a Ballast Water Record Book, an International Ballast Water Management Certificate, and conduct a ballast water

SEA Topic	Potential Impact	Proposed Mitigation
		exchange at least 200nm from the coast and in a water depth of at least 200m. A Biosecurity Plan should be adopted for the construction, maintenance and decommissioning for vessels involved, with strict cleaning of equipment and machinery and strict management protocols to combat the spread of invasive species.
	Deoxygenation and introduction of microbial pathogens from construction vessels/associated activities	There is potential for deoxygenation to occur from the release of ballast water in construction vessels which have been stagnated or else deliberately deoxygenated for treatment of any non-indigenous species which may lead to a temporary lowering of oxygen levels with impacts on species and habitats dependent on specific conditions. Untreated or insufficiently treated effluent discharges & run-off from terrestrial sources & vessels may also lead to deoxygenation. Microbial pathogens may potentially be released from ballast water or other discharges from construction processes which may have environmental implications and impact indigenous populations.
	Adverse effects on species due to Electromagnetic Field (EMF) generation e.g., on benthic species, fish, marine mammals.	Risks currently associated with EMF generation for marine life are not considered to be significant at a population level, however, research has indicated that increased data is required for understanding anthropogenic EMF environmental standards. Accepted mitigation measures at the project planning phase include the configuration and orientation of cables to reduce the field strength of EMF generation. Cable burial to a depth of 1-3m may also be used to reduce EMF through increased separation distance from marine organisms, however the process of burial should be considered regarding any environmental effects. The need for further mitigation should be considered during project planning such as through identifying migratory routes and avoidance of placing EMF-generating cables within these areas, particularly for elasmobranch marine species to avoid potential barrier effects as the effects are uncertain and the degree of risk varies for species (Hermans et al., 2024). Where cable routes are proposed in proximity, coordination of cable routing, and protection is recommended between developer/operators to reduce the potential for cumulative effects.
	Adverse effects on habitats and species	Mitigation during the project planning phase to ensure appropriate modelling of hydraulic regimes is undertaken



SEA Topic	Potential Impact	Proposed Mitigation
	due to alteration of hydraulics, hydrodynamics or sediment dynamics around protective structures and surface laid elements of cables during operation.	and anticipated effects are assessed in relation to the presence of sensitive habitats and species within development areas.
	Adverse effects on species due to noise impacts during pre-construction (e.g., geophysical surveys, UXO clearance), cable installation and decommissioning. Including injury, behavioural, physiological, disturbance or displacement effects on marine mammals, fish, and birds.	At the project planning phase, geophysical surveys should be appropriate to the project needs and planned as the least intrusive, taking into account appropriate mitigation for sensitive species. Where possible, surveys and operations should be timed to avoid sensitive periods. It is important during project planning phases to have spatial and temporal considerations of other relevant simultaneous construction activities to minimise impacts. The primary impact on marine mammals would be that of underwater sound, from geophysical surveys prior to cable burial and UXO clearance (where required). Project-level assessments should therefore consider the impacts from this, with noise modelling conducted to determine the range at which marine mammals could potentially experience auditory injury. A Marine Mammal Management Plan (MMMP) may be required, on which JNCC should be consulted, including a commitment to adhering to the relevant JNCC Marine Mammal Mitigation guidelines. The use of trained Marine Mammal Observers before commencing noisy surveys is advisable with the use of Passive Acoustic Monitoring (PAM) if surveys are due to commence during hours of darkness or low visibility (JNCC, Natural England and Countryside Council for Wales, 2010). If marine mammals are observed, it is recommended that surveys do not commence for 20 minutes to allow mammal dispersal from the area via the MMOs and PAM system tracking the mammals. The duration of the pre-search and mitigation zone depends on the activity, and additional passive acoustic monitoring systems may complement MMOs. Avoidance of UXO should be prioritised over clearance. Whenever possible, UXO should be left in-situ, 'lift and shift' methodology used, or rendered harmless with disposal using low-noise methods that require the use of explosive material to effect clearance but in much smaller volumes compared to requirements high order



SEA Topic	Potential Impact	Proposed Mitigation
		detonation. All aim to render UXOs inert without resulting in a high order detonation. There should be clear justification whenever such methods are not used, and high order detonation is required. JNCC recommend that UXO clearance is applied for in separate marine licences rather than included in Development Consent Orders (DCOs). Where PAM is used, the JNCC guidelines for the use of PAM (JNCC 2023) should be followed. Mitigation measures such as consideration and reduction of noise emissions from installation methods where feasible e.g., use of jetting measures of lower sound production compared to the use of plough systems for trenching which generate higher noise and careful planning to minimise the impact of the temporal and spatial overlap between marine mammals and construction activity. Mitigation during project planning phases for construction and decommissioning to ensure that the number of vessels and noise generation on a cumulative basis is necessary for each phase of construction. Ensure management of vessel presence considers the necessity of each specific noise/vibration generation and, where possible, use noise abatement measures to reduce the input of anthropogenic noise. Where there is the potential for cumulative short-term negative effects on harbour porpoise within designated sites, JNCC guidelines should be adhered to, and individual developers could liaise with other operators to coordinate noisy activities wherever possible and ensure daily noise thresholds are not breached. Developers should, where possible, avoid noisy operations during the seasonal period of greater harbour porpoise abundance in the relevant SACs, when noise disturbance management applies. Specific bird species can be disproportionately impacted by cabling works due to their sensitivities to displacement (NRW, 2025). Project level assessment should consider the specific species and their foraging distances which may be impacted by development with suitable mitigation measures in place such as the timing of construction works to minimise impacts and use of up-to-date data to inform modelling process (Evans and Waggitt, 2023). Specific species may have certain distances applied regarding their sensitivity to the displacement which should be adhered to following project level assessment (JNCC, 2022).

SEA Topic	Potential Impact	Proposed Mitigation
		Consideration should be given at the project level to mitigation that reduces impacts within periods of vulnerable life stages such as annual migrations or known spawning periods
	Collision risks for marine mammals, fish and birds with vessels and machinery during pre-construction, installation, and decommissioning.	Mitigation in the project planning phase to consider key areas of use and migratory routes, including through appropriate surveys and consultation with key stakeholders and groups. Relevant seabird tracking data registered on Birdlife International Seabird Tracking Database, https://data.seabirdtracking.org should be considered. Monitoring for the presence of marine mammals may be required, as determined on a case-by-case basis. Further mitigation includes the enforcement of speed limits for installation, maintenance, and decommissioning vessels in areas of high marine mammal or fish species abundance. A Vessel Management Plan may be required, including a commitment to slower speeds and following regular routes wherever possible. Mitigation with temporal activity planning with night-time considerations for construction and maintenance vessels, for vessels involved in cable laying activities when birds are more vulnerable to collisions.
	Short-term disturbance and displacement for species e.g., marine mammals, birds, due to presence of vessels and machinery, and use of artificial lighting in construction and decommissioning phases.	At the project planning phase, construction and decommissioning phases should be avoided in periods of the year known to be important for bird breeding or specific stress-related times of year e.g., during moults. Where possible the planning of developments should avoid the breeding season to minimise impacts on these areas and where this cannot be avoided, construction timing should be well planned and works duration, and invasive workings should be kept to a minimum in these areas. Monitoring during the project planning phase for mitigation to understand trends in site populations and displacement effects with developments. Mitigation during the project planning phase with considerations of the location and timing of works (e.g., daily/seasonal periods which may be important for certain species such as fish species moving to the surface during daily periods or seasonal breeding periods) to reduce impacts on migration and breeding. Where this cannot be avoided, construction timing should be well planned and works duration, and invasive workings should be kept to a minimum in these areas. Avoidance of installation during turtle migration periods and avoidance

SEA Topic	Potential Impact	Proposed Mitigation
		of turtle migration routes can also be used to reduce the risk of displacement. Mitigation measures for reducing impacts on birds, particularly migratory birds, from lighting used on vessels may be considered at the project stage, as relevant e.g., removal of steady state red lights for flashing lights or green down-lights to reduce upward light transmission or the use of radar-activated lighting to only switch on lighting whenever aircraft are near vessels involved in installation.
	Adverse effects on marine species due to the generation of heat by installed cables.	Mitigation at the project planning phase through cable burial to a suitable depth may help to prevent localised water column temperature fluctuations.
	Onshore Cabling	
	Impacts on designated sites.	Mitigation during the project planning phase to avoid designated areas for development. Screening for Appropriate Assessment where European Sites may be affected – all potential projects must ensure compliance with the requirements of the Habitats Regulations (further mitigation is given in Table 5 for European Sites). If designated sites cannot be avoided, suitable mitigation steps should be used.
	Direct loss of coastal habitats with pre-construction clearance and construction works for cabling landfall. Direct loss of, or damage to, terrestrial habitats along cable routes, including rare and sensitive habitats and potential for effects on species that depend on these habitats. Short-term habitat loss, damage, alteration or fragmentation.	Scoping of relevant specialist ecological surveys during the detailed planning stage and prior to any construction works. An Ecological Clerk of Works (ECoW) should be employed, as appropriate, during the construction phase. Development and implementation of a CEMP. Avoidance of notable habitats through micro-siting and use of Horizontal Direction Drilling (HDD) technology. Restricted working areas should be imposed to ensure minimal disturbance to sensitive habitats and vegetation clearance should be kept to a minimum. Following construction, replanting, landscaping, natural revegetating and habitat enhancement should be undertaken in line with appropriate guidelines that aim to improve local biodiversity and wildlife. This is likely to provide for medium and long-term benefits to the biodiversity, flora and fauna near the working areas. Where possible, original sediment / soil should be reinstated to original levels to facilitate natural restoration and recolonisation of habitats.
	Introduction of soil-borne diseases or pests, or the	Cleaning of equipment and machinery along with strict management protocols to combat the spread of invasive species. Pre- and post-construction surveys for invasive

SEA Topic	Potential Impact	Proposed Mitigation
	introduction/spread of invasive, non-native species.	species may be recommended in areas of known invasive species risk. If invasive species are found to be present, an Invasive Species Management Plan should be prepared to outline control and or removal measures to ensure such species are not spread during construction or operation of any future projects.
	Pollution of the terrestrial environment from construction materials or fuel/chemical spills. Pollution / siltation of watercourses during construction.	Development and implementation of a CEMP and related best practice pollution avoidance measures. Consultation with relevant stakeholders at the project planning stage. The planning of developments should aim to avoid known aquatic nursery or spawning grounds. Where these cannot be avoided, construction timing should be well planned with the works duration, and any invasive workings should be kept to a minimum in these areas. Any works involving open cut crossings should be carried out during the period May to September to avoid interruption of salmonid spawning runs, spawning, incubation of eggs and the early developmental stages.
	Injury or mortality to mammals, reptiles, birds and bats during construction due to vehicle collision and the presence of open compounds, and direct loss of nests/young birds during vegetation clearance.	Scoping of relevant specialist ecological surveys during the detailed planning stage and prior to any construction works. A European Protected Species licence will be required where works may impact these species, and agreement of any species protection planning with the relevant SNCBs. An ECoW should be employed, as appropriate, to during the construction phase. Development and implementation of a CEMP and Construction Traffic Management Plan (CTMP) during construction, which should include best practice guidance to avoid, minimise and mitigate effects on the environment during construction, and which should provide principles for the safe operation of construction vehicles. This will reduce the risk of injury and/or mortality during construction. Where applicable, prior to any vegetation clearance, an ecologist should be contracted to undertake a 'pre-vegetation clearance' survey for signs of nesting birds and important species. Should important species be found during surveys the sequential approach of avoid, reduce or mitigate should be adopted to prevent significant impacts. Restricted working areas should be imposed to ensure minimal disturbance to sensitive habitats and vegetation clearance should be kept to a minimum. Vegetation clearance involving nesting habitats should only occur outside the main breeding bird season from September to March.



SEA Topic	Potential Impact	Proposed Mitigation
	Disturbance and displacement to mammals, reptiles, birds and bats through lighting (and associated light spill), noise, vibration, pollution or vehicle movements during construction and decommissioning phases along onshore cable route and landfall sites. Potential for disturbance and displacement of fish and amphibians from noise and vibration (particularly from HDD use) from works near to waterways.	As for potential impact of injury or mortality. For works involving significant vibration such as HDD, relevant stakeholders (such as fisheries boards) should be consulted prior to construction, and suitable mitigation measures should be agreed prior to works being undertaken.
	Onshore Substations / Converter Stations	
	Impacts on designated sites.	As for onshore cabling.
	Direct loss of, or damage to, terrestrial habitats within the construction area, including rare and sensitive habitats and potential for effects on species that depend on these habitats. Short-term habitat loss, damage, alteration or fragmentation.	As for onshore cabling. The selection of onshore substation/converter station sites should be influenced by prioritising avoidance of important and sensitive habitats. Relevant targeted ecological surveys should be undertaken prior to construction and micro-siting as required to relocate works away from important or legally protected habitats and species features.
	Construction phase disturbance and displacement of mammals, birds and bats due to vehicle movements, light, noise and vibration. Disturbance of fish and amphibians if works in/near watercourses.	As for onshore cabling.

SEA Topic	Potential Impact	Proposed Mitigation
	Operational phase displacement of due to the presence of the infrastructure, and disturbance due to increased lighting, noise, and vibration pollution, which can arise from the operation and maintenance activities at the converter station / substation.	Development and implementation of a Lighting Management Plan (LMP), as required. A plan should be developed and implemented during operation of the substation/converter station which considers lighting regimes, noise and vibration pollution. This may include modelling of potential impacts and considerations made on how to minimise these effects during the design of the substation/converter station such as the use of vegetation plantation for screening of light pollution, subject to appropriate project level considerations of the local area. It may also include considerations on the undertaking of maintenance activities to minimise disturbance and displacement, which may include restrictions on the timing and duration of maintenance.
	Pollution of/physical change to watercourses and effects on aquatic species due to continued sedimentation from bare ground or accidental pollutant leaks during operation of the infrastructure.	As for onshore cabling. A plan should be developed and implemented during operation of the substation/converter station that details how fuels and other toxic substances should be handled and stored. An emergency procedure plan should be in place during operation that details the actions necessary in the event of a contamination incident.
	Introduction/spread of invasive, non-native species.	As for onshore cabling, cleaning of equipment and machinery along with strict management protocols to combat the spread of invasive species during operation and maintenance.
	Injury or mortality to mammals, reptiles, birds and bats during construction due to vehicle collision and the presence of open compounds, and direct loss of nests/young birds during vegetation clearance.	As for onshore cabling.
Population and Human Health	Offshore Cabling	
	Short-term disturbance (noise and visual) to local populations and displacement of marine	Mitigation during the project planning phase may include timing considerations e.g., construction and decommissioning noise occurring during daylight hours to avoid impacts on local population health, where local

SEA Topic	Potential Impact	Proposed Mitigation
	leisure and recreational users (e.g. <i>recreational sailing, fishing, water sports and beach/coastal use</i>) during construction, decommissioning and maintenance.	populations have potential to be affected. Regular communication with local communities is advisable to monitor complaints regarding noise and vibration emissions from construction works. To minimise impacts on recreational activity, suitable planning should occur during the project planning phase to avoid areas of key importance to mitigate against deterioration in leisure activity access. Suitable management during the project planning phase on the use of lighting during construction activities may be implemented, as relevant and required, to minimise potential impacts on nearby populations.
	Impacts on marine and coastal leisure and recreational users (collision risks with <i>cable protection materials, particularly in shallow waters</i>).	Any licensing and development of cabling should aim to ensure the minimisation of risks to other marine users and must be subjected to planning policy specific to such projects e.g., the UK Marine Policy Statement and Marine Plans for England, Scotland and Wales. See mitigation for 'Risk of entanglement of fishing gear and anchors along cable routes e.g., from cable protection armouring' under the Material Assets SEA topic. Suitable safety information should be communicated to the public through various communicative means.
	Onshore Cabling	
	Short-term access restrictions to coastal areas for marine and recreational users and local communities during construction. Direct disturbance and potential access restrictions to private properties. Temporary disturbance to/loss of community land areas during construction and maintenance.	Establishment of effective communication with local communities such as through a Local Liaison Committee. Disturbances can be kept to a minimum with good working practices, planning and timing. Development and implementation of a CEMP which should include mitigation and monitoring measures and commitments, and which should detail standard best practice to reduce noise emissions during the construction phase. Noise-producing activities such as excavation and piling should only take place during daylight hours and monitoring of these activities should be ongoing. Continued liaison with local communities is advised with regard to complaints concerning noise and vibration emissions resulting from construction works.
	Short-term disturbance (noise and visual, traffic, dust) to local populations during construction,	Development of dust minimisation plans in advance of works. Dust suppression measures in place during construction, for example establishing appropriate speed limits over unmade surfaces and establishing wheel washing facilities on construction sites. Continued liaison

SEA Topic	Potential Impact	Proposed Mitigation
	decommissioning and maintenance/repairs.	with local communities is advised with regard to complaints concerning dust releases resulting from construction works. Development and implementation of a CTMP, which should detail traffic management planning to minimise road traffic impacts and access restrictions.
	Potential for major accidents (e.g. fires/explosions, chemical spills) during the construction or decommissioning processes.	Developments should be designed in accordance with industry good practice, and account for anticipated environmental conditions and receptors to minimise the potential for harm. Construction and operation should be managed through health and safety regulations, including the Construction (Design and Management) Regulations 2015 and the Health and Safety at Work etc. Act 1974. Development and implementation of a Pollution Incident Response Plan.
	Perceived risk of EMF generated by cables on human health.	Infrastructure should be designed to ensure it does not exceed the Government's adopted exposure limits and policies.
	Onshore Substations / Converter Stations	
	Exposure to hazardous contaminants during construction.	Developments should be designed in accordance with industry good practice, and account for anticipated environmental conditions and receptors to minimise the potential for harm. Construction and operation should be managed through health and safety regulations, including the Construction (Design and Management) Regulations 2015 and the Health and Safety at Work etc. Act 1974. Development and implementation of a Pollution Incident Response Plan should hazardous contaminants be released.
	Disturbance (noise, dust, light), to the local population during construction.	See mitigation for onshore cabling. Suitable management during the project planning phase on the use of lighting is required to minimise potential impacts on nearby populations.
	Disturbance (lighting, noise, vibration) during operation and maintenance of the	Development and implementation of a LMP, as required. A plan should be developed and implemented during operation of the substation/converter station which considers lighting regimes, noise and vibration pollution.

SEA Topic	Potential Impact	Proposed Mitigation
	substation/converter station.	This may include modelling of potential impacts and considerations made on how to minimise these effects during the design of the substation/converter station such as the use of vegetation plantation for screening of light pollution, subject to appropriate project level considerations of the local area. It may also include considerations on the undertaking of maintenance activities to minimise disturbance and displacement, which may include restrictions on the timing and duration of maintenance.
	Demographic and socio-cultural changes due to construction workers and to workers during operation (e.g. access to housing, services).	Demographic and socio-cultural changes should be assessed as part of a socio-economic impact appraisal within EIAs for future developments projects associated with the HND Implementation Plan.
	Disturbance and temporary (construction phase) or permanent (presence of the station) land-take to private properties or loss of community land areas. Displacement or access restriction for recreational/leisure users during operation.	See mitigation for onshore cabling. To minimise impacts on recreational and leisure activity, suitable planning should occur during the project planning phase to avoid areas of key importance to mitigate against deterioration in leisure activity access.
Geology, Soils and Land Use	Offshore Cabling	
	Damage (direct or indirect) to designated geological/geomorphological features within designated sites (WHSs, UNESCO Geoparks, MCZs, SSSIs), and other features of importance, during cable installation or decommissioning.	Mitigation during the project planning phase with the conduction of geophysical and geotechnical surveys to identify areas of key geological/geomorphological interest, with avoidance of these areas during development. Avoidance of rocky outcrops for installation is advisable for reducing potential impacts on geology and geomorphological features. Consultation with SNCBs where potential effects on designated features are identified during project planning.
	Loss of seabed sediments and change in morphology during installation and decommissioning.	Modelling of hydrodynamic and sediment transport processes during the project planning phase. Information on sediment transport pathways will require further detail at the project level to assess potential effects and determine any appropriate mitigation.



SEA Topic	Potential Impact	Proposed Mitigation
	Alteration of sediment transport due to cable presence.	Minimise the dispersal of sediment e.g., through the use of bubble curtains. Decommissioning methods should be used that aim to minimise the amount of sediment generated.
	Seabed contamination during construction and operation.	During project planning, pre-construction surveys should be conducted to identify potential sources of seabed contamination, with avoidance of these areas for development. Project phase mitigation should also assess the degree of disturbance occurring on the seabed and, if appropriate, additional contaminant and water quality monitoring may be implemented. Materials used in construction e.g., drilling wastes generated and particulate discharges, should aim to be of low toxicity to ensure lower contamination risk. Compliance with legislation and regulations regarding litter and marine pollution, in accordance with the objectives of the Marine Strategy Regulations 2010 and Marine Plans for England, Scotland and Wales.
	Heat generation by cables during operation which may affect sediments.	Infrastructure should be designed such that it prevents the generation of heat that could significantly impact on soils/sediments, this may include certain design considerations on the materials used or through cable burial.
	Onshore Cabling	
	Damage (direct or indirect) to designated geological/geomorphological features within designated sites, and other features of importance, during cable installation or decommissioning.	See mitigation for offshore cabling.
	Riverbed contamination during construction and maintenance (e.g., through fuel, chemical spills).	Pollution prevention guidance notes (PPGs) should be consulted, which provide detailed guidance and appropriate mitigation measures to avoid or reduce the impact on the water environment. Develop, implement and enforce a Water Pollution Prevention and Environmental Emergency Response Plan for all work sites. This should include good site practices

SEA Topic	Potential Impact	Proposed Mitigation
		as described in the Good Practice Guidance notes proposed by SEPA. All protective coatings used should be suitable for use in the aquatic environment and used in accordance with best environmental practice. Storage facilities would contain and prevent the release of fuels, oils and chemicals associated with plant, refuelling and construction equipment into the environment. Emergency and spill response equipment should be kept on hand during construction.
	Loss of soils during construction and increased susceptibility to erosion. Effects on soil quality, e.g. through compaction. Temporary loss of land uses e.g., agricultural lands, woodlands, forestry. Potential for permanent loss if not reinstated.	Good site management practices and construction management plans, and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Development and implementation of a CEMP and adoption of Construction Best Practice. Restricted working areas should be imposed to ensure minimal disturbance to sensitive soils and land uses and vegetation clearance should be kept to a minimum. Land within the working area should be reinstated as near as practical to its former condition.
	Contamination due to interaction with contaminated lands, ground gas or UXO, or due to spillages during construction.	Identification of historically contaminated areas and sites and careful route planning during the design stage to avoid these sites where possible, to prevent further contamination. Good management, planning and working practices to minimise contamination of nearby soils and land uses if works crossing historically contaminated sites or hazardous soils cannot be avoided. Good working practices may include installation of wheel wash and plant washing facilities. Strict management and regulation of construction activities. Sampling and analysis of sites prior to construction works in potentially hazardous areas, to establish potential risk.
	Onshore Substations / Converter Stations	
	Short to long-term disturbance of features designated for onshore geological or	See mitigation for offshore cabling.

SEA Topic	Potential Impact	Proposed Mitigation
	geomorphological importance/interest.	
	Short to long-term impacts on mineral resources. Potential for sterilisation of mineral resource due to development at surface.	Project planning and mitigation should aim to avoid potential disruption of future mineral resources. During the pre-construction and construction phase suitable technical and expert analysis should be used to determine if any mineral resources are uncovered.
	Temporary or permanent loss of land use in the substation/converter station area e.g., agricultural land and soils due to land take, forestry or woodland due to felling, commercial land, private properties and housing due to land take, community land/recreational resource. Reduced access to lands during construction or operation (e.g., agricultural lands, commercial lands, forestry, woodlands, community lands).	Good spatial planning to minimise the potential for such impacts. Good site management practices and construction management plans, and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Development and implementation of a CEMP and adoption of Construction Best Practice. Restricted working areas should be imposed to ensure minimal disturbance to sensitive land uses and vegetation clearance should be kept to a minimum.
	Temporary or permanent loss of soils, compaction or physical damage to peat or carbon rich soils, and increased risk of erosion.	Good spatial planning to minimise the potential for such impacts. Good site management practices and construction management plans, and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Development and implementation of a CEMP and adoption of Construction Best Practice. Restricted working areas should be imposed to ensure minimal disturbance to sensitive soils and vegetation clearance should be kept to a minimum.
	Contamination due to interaction with contaminated lands,	As described for onshore cabling. Compliance with all relevant safety standards. Best practice should be followed in the storage, use and

SEA Topic	Potential Impact	Proposed Mitigation
	ground gas or UXO, or due to spillages during construction.	disposal of oils and chemicals to avoid impacts on soils and groundwater during operation resulting from spills or leaks.
Water	Offshore Cabling	
	Effects on water quality due to sediment mobilisation and disturbance during cable installation and decommissioning.	Avoidance of areas of known potential contamination during project planning. Mitigation at the project level with sediment testing and water quality monitoring if required through construction and decommissioning phases to manage potential effects. Consultations should take place with environmental bodies on the construction methodology and appropriate timing of works to provide the least potential for sediment mobilisation to waterbodies. A WFD Compliance Assessment should be carried out should a development interact with a WFD waterbody.
	Effects on water quality due to construction discharges or accidental contaminant release from machinery or vessels during construction and maintenance.	At the project planning phase, mitigation against water quality impacts from construction-based discharges by using materials of low toxicity; coatings/treatments must be suitable for the marine environment. Mitigation against accidental contamination from vessels as described under Material Assets – Shipping and Navigation. The use of Shipboard Oil Pollution Emergency Planning (SOPEP) plans should be considered as mitigation within the project planning phase, as well as pollution and environmental emergency response plans. Preparation and adherence to a Pollution Prevention and Control Plan during construction, maintenance, and decommissioning activities. A Litter Pollution Prevention strategy should be designed for all stages of development to prevent marine pollution, in accordance with the objectives of the Marine Strategy Regulations 2010 and Marine Plans for England, Scotland and Wales.
	Effects on water quality during cable operation due to leakage of insulation fluids or anti-fouling components.	At the project planning phase, mitigation to ensure that any fluids or anti-fouling components (chemicals currently used in the cable industry are similar to those from the oil and gas industry which are controlled via the Offshore Chemical Notification Scheme reflecting the OSPAR Harmonised Mandatory Control Scheme) – chemicals used are typically within closed systems, minimising the risk of discharges.

SEA Topic	Potential Impact	Proposed Mitigation
	Onshore Cabling	
	Effects on surface water quality due to sediment mobilisation and disturbance during cable installation, maintenance and decommissioning.	Construction good practices should be adhered to (e.g. adherence to Construction Industry Research and Information Association (CIRIA) guidance and Guidelines for Pollution Prevention). Good management and planning to keep water quality disturbance to a minimum. Precautions should be put into place to avoid or minimise the generation and release of sediments into any watercourses. Any potential water quality issues from construction should be contained and treated to ensure no damage to natural waterbodies. Construction will have to be planned appropriately, using Best Available Techniques / Technology (BAT) at all times, to ensure water quality issues are kept to a minimum, with no significant adverse effects. Develop, implement and enforce an Erosion and Sedimentation Control Plan (ESCP) where risks are identified to downstream European sites. Sediment sampling may be recommended in the vicinity of where any sediment will be disturbed laying or burying the cable at landfill. A WFD Compliance Assessment should be carried out should a development interact with a WFD waterbody.
	Effects on surface water quality due to construction discharges or accidental contaminant release from machinery during construction and maintenance.	Construction good practices should be adhered to (e.g. adherence to CIRIA guidance and Guidelines for Pollution Prevention), which provide detailed guidance and appropriate mitigation measures to avoid or reduce the impact on the water environment. Develop, implement and enforce a Water Pollution Prevention and Environmental Emergency Response Plan for all work sites. This should include good site practices as described in the Good Practice Guidance notes proposed by SEPA. All protective coatings used should be suitable for use in the aquatic environment and used in accordance with best environmental practice. Storage facilities would contain and prevent the release of fuels, oils and chemicals associated with plant, refuelling and construction equipment into the environment.

SEA Topic	Potential Impact	Proposed Mitigation
		Emergency and spill response equipment should be kept on hand during construction.
	Temporary or permanent physical alterations to waterbodies or effects on water quantity.	Development and implementation of a CEMP. Works within or alongside waterbodies should be designed to ensure no significant detrimental impacts on flow conveyance. Any works that could affect the quality or quantity of surface waters, groundwater aquifers or groundwater dependent systems should be considered through the development and implementation of a surface water and groundwater monitoring plan. Trenchless techniques, such as HDD should be the preferred crossing method for any WFD waterbodies or sensitive waterbodies such as salmonid rivers, shellfish waters or bathing waters where technically feasible.
	Effects on groundwater quantity or quality due to mobilisation of existing areas of contamination or accidental release of pollutants during construction and maintenance, or due to chemical leaks and concrete leaching during operation.	Development and implementation of a CEMP including a groundwater management plan, and adherence to construction good practice for the avoidance of pollution.
	Effects on surface and groundwater available for abstraction for public, private water supply, and agricultural use due to changes in catchment flows.	At the project planning stage, cable routes should aim to avoid known water supply source points and infrastructure. If this is not possible, a protection plan should be developed and implemented.
	Short or long-term effects on recreational activities dependent on waterbodies due to changes in water quality or quantity.	See mitigation for impacts on water quality or quantity.
	Short or long-term elevated risk of increased fluvial and pluvial flooding due to alterations in the degree	Developments to be subject to detailed Flood Risk Assessment at the detailed planning stage, where risk has been identified. Avoid flood extents where possible or provide design considerations that are both resilient to the potential flood risk and provides no transfer of flood

SEA Topic	Potential Impact	Proposed Mitigation
	of impervious surfaces. Potential for contamination associated with flood events.	risk once developed. Critical infrastructure should not be placed in floodplains where it may be impacted, or where it may be inaccessible during flood events.
	Onshore Substations / Converter Stations	
	Effects on surface water quality due to sediment mobilisation and disturbance during installation, maintenance and decommissioning.	Construction good practices should be adhered to (e.g. adherence to CIRIA guidance and Guidelines for Pollution Prevention). Good management and planning to keep water quality disturbance to a minimum. Precautions should be put into place to avoid or minimise the generation and release of sediments into any watercourses. Any potential water quality issues from construction should be contained and treated to ensure no damage to natural waterbodies. Construction will have to be planned appropriately, using BAT at all times, to ensure water quality issues are kept to a minimum, with no significant adverse effects. Develop, implement and enforce an ESCP where risks are identified to downstream European sites. A WFD Compliance Assessment should be carried out should a development interact with a WFD waterbody.
	Effects on surface water quality due to construction discharges or accidental contaminant release from machinery during construction and maintenance.	Construction good practices should be adhered to (e.g. adherence to CIRIA guidance and Guidelines for Pollution Prevention), which provide detailed guidance and appropriate mitigation measures to avoid or reduce the impact on the water environment. Develop, implement and enforce a Water Pollution Prevention and Environmental Emergency Response Plan for all work sites. This should include good site practices as described in the Good Practice Guidance notes proposed by SEPA. All protective coatings used should be suitable for use in the aquatic environment and used in accordance with best environmental practice. Storage facilities would contain and prevent the release of fuels, oils and chemicals associated with plant, refuelling and construction equipment into the environment.

SEA Topic	Potential Impact	Proposed Mitigation
		Emergency and spill response equipment should be kept on hand during construction.
	Effects on groundwater quantity or quality due to mobilisation of existing areas of contamination or accidental release of pollutants during construction and maintenance, or due to chemical leaks and concrete leaching during operation.	Development and implementation of a CEMP including a groundwater management plan, and adherence to construction good practice for the avoidance of pollution.
	Effects on catchment flow pathways and water quantity in surface waters and groundwaters due to activities required to facilitate construction (e.g., diversions, abstraction).	Works within or alongside waterbodies should be designed to ensure no significant detrimental impacts on flow conveyance. Any works that could affect the quality or quantity of surface waters, groundwater aquifers or groundwater dependent systems should be considered through the development and implementation of a surface water and groundwater monitoring plan. Modelling of catchment flow pathways should be considered during station planning and design to minimise the potential for effects.
	Short or long-term elevated risk of increased fluvial and pluvial flooding due to alterations in the degree of impervious surfaces. Potential for contamination associated with flood events.	Developments to be subject to detailed Flood Risk Assessment at the detailed planning stage, where risk has been identified. Avoid flood extents where possible or provide design considerations that are both resilient to the potential flood risk and provides no transfer of flood risk once developed. Critical infrastructure should not be placed in floodplains where it may be impacted, or where it may be inaccessible during flood events.
	Effects on resource or quality of waters used for drinking water, including protected groundwater abstraction areas.	At the project planning stage, substation/converter station development areas should aim to avoid known water supply source points and infrastructure. If this is not possible, a protection plan should be developed and implemented.
Air	Offshore Cabling	
	Temporary increase in air emissions from vessels and machinery	At the project phase, emissions of air pollutants should be minimised through adherence with the requirements of the Merchant Shipping (Prevention of Air Pollution from

SEA Topic	Potential Impact	Proposed Mitigation
	during cable installation, maintenance, and decommissioning.	Ships) Regulations 2008 ¹ , and amendments of The Merchant Shipping (Prevention of Air Pollution from Ships and Motor Fuel (Composition and Content) (Amendment) Regulations 2014 and the Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2021 ² . Further mitigation at project level should include limiting the idling of vessels or construction machinery when not required or in use to minimise emissions to air.
	Onshore Cabling	
	Temporary increase in dust generation and air emissions and reductions in local air quality machinery during cable installation, maintenance, and decommissioning.	Development and implementation of a CEMP, including development of a dust minimisation plan. Dust suppression measures in place during construction to include regular dampening down of stockpiles, establishing appropriate speed limits over unmade surfaces and establishing wheel washing facilities on construction sites. Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable. Limiting the idling of construction machinery when not required or in use to minimise emissions to air.
	Onshore Substations / Converter Stations	
	Temporary increase in dust generation and air emissions and reductions in local air quality from machinery during construction, maintenance, and decommissioning of the substation/converter station.	As described for onshore cabling.
Climatic Factors	Offshore Cabling	
	Temporary increase in GHG emissions from	At the project phase, GHG emissions from vessels should be minimised through adherence to Regulations from the

¹ The Regulations implemented 19 regulations and a technical code on the control of emissions of Nitrogen Oxides applicable to ships over 400 gross tonnages as well as fixed and floating platforms and drilling rigs – these vessels must be fitted with an exhaust gas cleaning system and use fuel oil with a sulphur content less than 1.5% m/m.

² The 2021 amendment implemented several air quality measures to control sulphur and nitrogen oxide emissions.

SEA Topic	Potential Impact	Proposed Mitigation
	vessels and machinery during cable installation, maintenance, and decommissioning.	Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2021. Further mitigation at project level should include limiting the idling of vessels or construction machinery when not required or in use to minimise GHG emissions.
	Seabed disturbance or loss and release of CO ₂ during construction and decommissioning, particularly relating to 'blue carbon' habitats.	During the project planning phase, areas that have the potential for high carbon sequestration or as blue carbon hotspots should be considered and development within these areas should be avoided to ensure minimal disturbance e.g., through surveys and ecosystem mapping of sediment potential, and consultation with statutory nature conservation bodies or other relevant stakeholders regarding the location of areas of known importance such as 'blue carbon' habitats. Where avoidance is not possible, overlap should be minimised and environmental significance fully considered.
	Potential for the landfall locations of cables to be affected by climate change influenced coastal change.	Considerations on projected climate change scenarios should be accounted for during project planning phases for suitable locations of landfall points of cables and locations of associated coastal infrastructure to avoid potential impacts on these from flooding, sea-level rise or storm damage. Associated infrastructure and landfall areas should also be chosen through modelling of potential scenarios, to ensure that they do not increase the risk of flooding or coastal damage elsewhere.
	Onshore Cabling	
	Temporary increase in GHG emissions from vehicles and machinery during cable installation, maintenance, and decommissioning.	Plan construction scheduling to minimise vehicle trips. Limit idling of heavy equipment unless needed for the safe operation of the equipment.
	Temporary loss of GHG sequestering vegetation / short-term release of CO ₂ due to ground disturbances if the construction or decommissioning phase impacts areas of carbon storage such as peatland, woodland or saltmarsh habitats.	Good planning and timing of works to minimise construction footprint impacts. Following construction, replanting, landscaping, and natural revegetating, should be undertaken in line with appropriate guidelines that aim to improve local GHG sequestering vegetation cover.



SEA Topic	Potential Impact	Proposed Mitigation
	Short-term generation of GHG emissions during waste removal, transport and disposal processes for onshore infrastructure and materials.	A lifecycle approach should be taken to the assessment of GHG emissions at the project stage to capture the potential for both direct and indirect emissions. GHG emissions from construction activities should be considered for a whole life carbon assessment in line with IEMA guidance (IEMA, 2022). Development and implementation of a CEMP, which should include best practice management of material resources and waste streams.
	Potential for the coastal areas to be affected by climate change influenced coastal change.	Individual developments to be subject to detailed Flood Risk Assessment at the detailed planning stage, where risk has been identified, including for climate change scenarios. Avoid climate change flood extents where possible or provide infrastructure that is both resilient to the potential flood risk and provides no transfer of flood risk once developed. Cables and associated critical infrastructure should not be placed in floodplains where it may be impacted, or where it may be inaccessible during flood events.
	Onshore Substations / Converter Stations	
	<i>Short-term GHG emissions</i> through the production of materials, transport of materials and onsite energy consumption during construction as well as emissions from vehicles and machinery during construction, maintenance and decommissioning. Short-term generation of GHG emissions during waste removal, transport and disposal processes for onshore infrastructure and materials.	As described for onshore cabling. At the project planning stage, infrastructure should consider the Publicly Available Specification 2080:2023 specification of infrastructure and buildings carbon management (BSI, 2023).
	Temporary loss of GHG sequestering vegetation / short-term release of CO ₂ due to ground disturbances if the	As described for onshore cabling. During the project planning phase, areas that have the potential for high carbon sequestration should be



SEA Topic	Potential Impact	Proposed Mitigation
	construction or decommissioning phase impacts areas of carbon storage such as peatland, woodland or saltmarsh habitats. Long-term reduction in carbon storage/sequestration due to loss/disturbance of peat soil, or permanent loss of carbon sequestering habitats.	considered and development within these areas should be avoided to ensure minimal disturbance.
	Potential for climate change impacts (e.g., extreme high temperatures, storms, drought, heavy rainfall and flooding) to affect construction and operation.	As described for onshore cabling.
Material Assets	Offshore Cabling	
	Existing Infrastructure: Cables and Pipelines	
	Damage to existing cables or pipelines during installation and operation, with potential to impact telecommunications or release hazardous substances. Reduced access to existing cables or pipelines during installation and operation.	At the project planning phase, the location of pre-existing cable and pipeline routes should be considered. Safety zones (e.g., 500m avoidance areas) are typically used for activities of the offshore oil and gas sector to ensure the safety of subsea structures and installations. Safety zones can be used for pre-existing cables and pipelines and could be used to avoid disruption within these zones. Where existing cables and pipelines must be crossed, safety zones may not be applicable and communications with the owners of the existing cables and pipelines should be made. During project planning and through the installation process, there should be communication with the owners of existing cables and pipelines that could potentially be affected to ensure that the construction process does not impact on access requirements to this infrastructure and a crossing agreement should be finalised.

SEA Topic	Potential Impact	Proposed Mitigation
	Other Users: Commercial Fisheries and Aquaculture	
	Short-term displacement from fishing grounds during installation and decommissioning activities.	Mitigation during the project planning phase should consider avoidance of disturbances during key fishing seasons, in consultation with the industry. Good site management practices and construction management plans and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale.
	Increased collision risk with vessels during construction and maintenance.	For avoidance of vessel collision and allision risk see mitigation under Shipping and Navigation. Standard mitigation methods to reduce collision risks include extensive notifications of works occurring, use of safety zones, if appropriate, and ensuring the maintenance of access to ports and harbours for fishing vessels. Provisions should be made by the offshore developers for seabed maps showing accurate and precise locations of any hazards and potential alterations on seabed depths. Construction and maintenance vessels should use suitable lighting to ensure that they are visible during night-time and in poor weather conditions to reduce the risk of collisions.
	Risk of entanglement of fishing gear and anchors along cable routes e.g., from cable protection armouring.	Mitigation from the UK Hydrographic Office Mariners Handbook should be adhered to, which advises vessels not to anchor or trawl for fish within 0.25nm of a subsea cable or within discretionary Cable Protection Zones (CPZ), requires suitable and accurate updating and accurate marking of marine maps to inform the location of such features by developers. Cables should be buried, where possible, in areas of importance for commercial fisheries. If this is not possible, consideration of alternative protection that is of lower risk to fisheries could be considered. Where cable routes are proposed in proximity, coordination of cable routing, and protection is recommended between developers/operators to reduce the potential for cumulative effects.
	Impacts of spoil, construction or decommissioning debris on the seabed.	Ensure minimal construction spoil or decommissioning debris is left to prevent impacts on fishing activities, such as the use of bottom trawler-based equipment or through affecting underkeel clearance. All feasible removal of such material should take place and be incorporated into the construction and decommissioning programmes.

SEA Topic	Potential Impact	Proposed Mitigation
	Direct and indirect impacts on commercial fish and shellfish species.	Mitigation as set out under the Biodiversity, Flora and Fauna; Geology, Soils and Land Use; and Water topics. Mitigation during project planning should consider avoidance of disturbances during key fishing seasons, in consultation with the industry e.g., the period of mussel seed settlement (February–April; September) and the salmon migration period (May–July). Where cable routes are proposed in proximity, coordination of cable routing, and protection is recommended between developers/operators to reduce the potential for cumulative effects.
	Other Users: Shipping and Navigation	
	Collision and allision risk with vessels during installation, operation and decommissioning, with potential for spillage of oil or hazardous cargo.	The integrated HND/HNDFUE and SEA development and constraints assessment has aimed to identify and avoid important navigational routes. At the project planning stage, mitigation should include the development of a navigational risk assessment, which surveys vessels within the vicinity of the proposed development and takes into consideration Marine Guidance Note (MGN) 654 (MCA, 2021), MGN 372 Amendment 1 (MCA, 2022), and the Methodology for Assessing the Marine Safety Navigational Safety and Emergency Response Risks of Offshore Renewable Energy Installations (MCA, 2023). Standard mitigation methods that should be considered during project planning include extensive notification of works occurring. A minimisation of the number of vessels present should also be employed, and guard vessels should be deployed within construction areas. Safety zones are typically 500m for vessels involved during installation, maintenance and decommissioning under The Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007 (as amended). Mitigation measures also include the guidance on vessel visibility based on MGN 654, IALA lighting G1162 (IALA, 2021), Trinity House guidance (Trinity House, 2016), and marking recommendations and vessel compliance with the Convention on the International Regulations for Preventing Collisions at SEA to reduce collision and allision risks. The use of SOPEP plans should be considered as mitigation within the project planning phase, as well as pollution and environmental emergency response plans.



SEA Topic	Potential Impact	Proposed Mitigation
	Temporary displacement from construction areas due to safety exclusion zones. Restrictions on port and harbour access.	As above, the integrated HND/HNDFUE and SEA development and constraints assessment has aimed to identify and avoid important navigational routes. Any licensing and development of offshore cabling should aim to ensure the minimisation of risks to other marine users, including shipping activity and freedom of navigation, and must be subjected to planning policy specific to such projects e.g., the UK Marine Policy Statement and Marine Plans for England, Scotland and Wales. Proposed developments should mitigate against alteration of the ease and safety of navigation in port approaches. Mitigation in the project planning phase should ensure that developments do not constrain entrances to harbours/ports that are typically high vessel activity areas. There should be regular communications with port authorities and issuing of the appropriate notifications during installation, maintenance, and decommissioning periods.
	Effects on search and rescue operations within installation/decommissioning areas.	Mitigation during the project planning phase with discussion and regular communication with groups involved with search and rescue, and provision of detailed maps and information on development areas. Preliminary assessment of the potential impacts of the offshore development on search and rescue should be considered as per Marine Guidance Note 654 ⁶ and the Methodology for Assessing the Marine Safety Navigational Safety and Emergency Response Risks of Offshore Renewable Energy Installations (MCA, 2023), to seek formal consent for marine works.
	Risk of entanglement of anchors along cable routes e.g., from cable protection armouring.	Mitigation from the UK Hydrographic Office Mariners Handbook should be adhered to, which advises vessels not to anchor within 0.25nm of a subsea cable or within discretionary CPZs, requires suitable and accurate updating and accurate marking of marine maps to inform the location of such features by developers.
	Other Users: Military Activities	
	Risk of UXO presence in cable routes during construction.	Areas of known live military firing or munitions disposal should be avoided during the next stage of consideration, prior to project development, At the project stage, mitigation should follow appropriate procedures for the management/removal of UXO e.g., Crown Estates 2006 (TCE, 2006) (Dealing with munitions in marine aggregates), DEFRA 2025, Reducing Marine Noise

SEA Topic	Potential Impact	Proposed Mitigation
		(DEFRA, 2025), UK Government 2025, Marine environment: unexploded ordnance clearance: Joint Position Statement (UK Government, 2025).
	Temporary disruption of military exercises and activities during construction and decommissioning phases.	During the project planning phase, mitigation must aim to avoid jeopardising national security unless the impacts are appropriately mitigated or deemed acceptable in consultation with the Ministry of Defence (MoD).
	Other Users: Disposal Areas	
	Disturbance of previously disposed materials during construction/decommissioning.	Mitigation during project planning phase to identify areas that were previously used for disposal, or sampling of sites prior to construction works in potentially hazardous areas, to establish potential risk e.g., pre-construction surveys and consultations with key stakeholders/companies to identify disposal areas.
	Disruption of vessel access to disposal sites during construction and decommissioning activities.	Mitigation during the project planning phase to identify key transit and navigational routes for vessels accessing disposal areas with consultation undertaken to avoid disrupting routes to the usage of safety exclusion zones to allow navigation/transit to areas to occur safely.
	Other Users: Mineral Resources and Aggregate Extraction	
	Disruption of vessel access to sites during construction and decommissioning activities.	Mitigation during the project planning phase to identify key transit and navigational routes for vessels accessing extraction sites with consultation undertaken to avoid disrupting routes to the usage of safety exclusion zones to allow navigation/transit to areas to occur safely.
	Loss of access to future mineral resources due to cable presence during the operational lifecycle.	Project planning and mitigation should aim to avoid potential disruption of future aggregate supplies. During the pre-construction and construction phase suitable technical and expert analysis should be used within GB waters to determine if any aggregate resources are uncovered.
	Other Users: Tourism	
	Temporary impacts on coastal tourism activities with the generation of noise and visual impacts and potential release of contaminants during	Mitigation during the project planning phase to avoid coinciding with the most disruptive periods of construction/decommissioning with high seasonality periods for tourism. Mitigation as set out under Population and Human Health topic for potential impacts on local populations and

SEA Topic	Potential Impact	Proposed Mitigation
	construction/decommissioning phases.	leisure and recreation, including disturbance and collision risk.
	Temporary impacts with the loss of access to coastal areas during construction/decommissioning phases.	Mitigation as set out under Water topic for potential pollution impacts to waterbodies. Mitigation as set out under Landscape, Seascape and Visual Amenity topic for potential visual impacts.
	Onshore Cabling	
	Existing Infrastructure: Cables and Pipelines	
	Damage to cables or pipelines during installation and operation, with potential to impact telecommunications or release hazardous substances.	Constraints should be identified and described in as much detail as possible during the early stages of a project, so that awareness of them and their potential impact can be managed. Incorporation of potential impacts and risks associated with other planned developments at the detailed planning stage. Consultation with other asset owners to establish the best possible working arrangements with the least disturbance.
	Reduced access to existing cables or pipelines during installation and operation.	During project planning and through the installation process, there should be communication with the owners of existing cables and pipelines that could potentially be affected to ensure that the construction process does not impact on access requirements to this infrastructure.
	Other Users: Commercial Onshore Fisheries	
	Reduced access to commercial fisheries during construction, maintenance and decommissioning.	Reduced access to commercial fisheries during construction, maintenance and decommissioning.
	Water quality/quantity impacts on commercial fish species during construction, maintenance and decommissioning.	Water quality/quantity impacts on commercial fish species during construction, maintenance and decommissioning.
	Other Users: Commercial Forestry	
	Temporary or permanent loss of woodland within onshore cable corridor.	Good site management practices and construction management plans and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Adoption of Construction Best Practice. Consultation with landowners and / or tenants to identify

SEA Topic	Potential Impact	Proposed Mitigation
		speciality lands that may require protection during construction. Consultation with landowners to develop compensation for lost crop value caused by construction works. Land within the working area should be reinstated as near as is practical to its former condition.
	Other Users: Military Activities	
	Risk of UXO presence in cable routes during construction.	Areas of known live military firing or munitions disposal should be avoided during the next stage of consideration, prior to project development, At the project stage, mitigation should follow appropriate procedures for the management/removal of UXO e.g., Crown Estates 2006 (TCE, 2006) (Dealing with munitions in marine aggregates), DEFRA 2025, Reducing Marine Noise (DEFRA, 2025), UK Government 2025, Marine environment: unexploded ordnance clearance: Joint Position Statement (UK Government, 2025).
	Temporary disruption of military exercises and activities during construction and decommissioning phases.	During the project planning phase, mitigation must aim to avoid jeopardising national security unless the impacts are appropriately mitigated or deemed acceptable in consultation with the MoD.
	Other Users: Disposal Areas	
	Disruption of access to disposal sites during construction and decommissioning activities.	Project planning and mitigation should aim to avoid potential disruption of access to disposal sites.
	Other Users: Mineral Resources and Aggregate Extraction	
	Loss of access to future mineral resources due to cable presence during the operational lifecycle.	Project planning and mitigation should aim to avoid potential disruption of future aggregate supplies. During the pre-construction and construction phase suitable technical and expert analysis should be used to determine if any aggregate resources are uncovered.
	Other Users: Tourism	
	Temporary impacts on coastal and onshore tourism activities with the generation of noise and visual impacts and	Mitigation during the project planning phase to avoid coinciding with the most disruptive periods of construction/decommissioning with high seasonality periods for tourism.

SEA Topic	Potential Impact	Proposed Mitigation
	potential release of contaminants during construction/decommissioning phases.	Mitigation as set out under Population and Human Health topic for potential impacts on local populations and leisure and recreation, including disturbance and collision risk.
	Temporary impacts with the loss of access to areas during construction/decommissioning phases.	Mitigation as set out under Water topic for potential pollution impacts to waterbodies. Mitigation as set out under Landscape, Seascape and Visual Amenity topic for potential visual impacts.
	Other Users: Road Network Users	
	Effects on the road network during construction and decommissioning (e.g., increased traffic, delays, impacts on public transport, road closures).	Development of good site management practices, traffic and construction management plans and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Minimise the frequency and duration of road closures. Adoption of Construction Best Practice.
	Other Users: Agriculture	
	Temporary loss of, or damage to, agricultural lands during construction, maintenance and decommissioning (e.g. direct impacts, impacts on field drains, impacts on waters used for livestock).	Good site management practices and construction management plans and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Adoption of Construction Best Practice. Consultation with landowners and / or tenants to identify speciality agricultural crops or lands that may require protection during construction. Consultation with landowners to develop compensation for lost crop value caused by construction works.
	Permanent loss of agricultural lands if these are not reinstated post-construction.	Land within the working area should be reinstated as near as practical to its former condition.
	Temporary impacts with the loss of access to agricultural lands during construction/decommissioning phases.	
	Onshore Substations / Converter Stations	
	Existing Infrastructure: Cables and Pipelines	
	Damage to cables or pipelines during	Constraints should be identified and described in as much detail as possible during the early stages of a

SEA Topic	Potential Impact	Proposed Mitigation
	installation and operation, with potential to impact telecommunications or release hazardous substances. Reduced access to existing cables or pipelines during installation and operation.	project, so that awareness of them and their potential impact can be managed. Incorporation of potential impacts and risks associated with other planned developments at the detailed planning stage. Consultation with other asset owners to establish the best possible working arrangements with the least disturbance. During project planning and through the installation process, there should be communication with the owners of existing cables and pipelines that could potentially be affected to ensure that the construction process does not impact on access requirements to this infrastructure.
	Other Users: Agriculture	
	Long-term to permanent loss of agricultural lands due to land take within the substation/converter station footprint.	Good spatial planning to minimise the potential for such impacts. Consultation with landowners to develop compensation for loss of assets, such as agricultural land, caused by development of new infrastructure. Good site management practices and construction management plans, and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Adoption of Construction Best Practice.
	Temporary loss of, or damage to, agricultural lands during construction, maintenance and decommissioning (e.g. direct impacts, impacts on field drains, impacts on waters used for livestock). Temporary impacts with the loss of access to agricultural lands during construction/decommissioning phases.	Good site management practices and construction management plans and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Adoption of Construction Best Practice. Consultation with landowners and / or tenants to identify speciality agricultural crops or lands that may require protection during construction. Consultation with landowners to develop compensation for lost crop value caused by construction works. Land within the working area should be reinstated as near as is practical to its former condition.
	Other Users: Commercial Forestry	
	Long-term to permanent loss of forestry lands due to land take or felling within the	Good site management practices and construction management plans and consultation with the competent and statutory authorities prior to any works should enable all impacts to be kept to a minimum over a short timescale. Adoption of Construction Best Practice.

SEA Topic	Potential Impact	Proposed Mitigation
	substation/converter station footprint.	Consultation with landowners to develop compensation for lost forestry value caused by construction works.
	Temporary loss of, or damage to, forestry lands during construction, maintenance and decommissioning (e.g., access roads, construction compounds, felling).	As above. Consultation with landowners and / or tenants to identify speciality agricultural crops or forestry lands that may require protection during construction. Land within the working area should be reinstated as near as practical to its former condition.
	Other Users: Mineral Extraction	
	Direct or indirect damage to mineral resources during construction.	Project planning and mitigation should aim to avoid known mineral resources.
	Loss of access to future mineral resources due to substation/converter station presence during the operational lifecycle.	Project planning and mitigation should aim to avoid potential disruption of future mineral resources. During the pre-construction and construction phase suitable technical and expert analysis should be used to determine if any mineral resources are uncovered.
	Other Users: Aviation	
	Short-term disturbance to flight and aviation ground-based radio/radar or penetration of aviation safeguarded/protected surfaces during construction.	Large-scale construction machinery may impact on radio and radar communications through the blocking of signals or lead to the false identifications of aircraft structures. Considerations on the locations of developments should be undertaken in line with consultations with the competent and statutory authorities prior to any works commencing to minimise the potential for impacts.
	Long-term disturbance to flight and aviation ground-based radio/radar or penetration of aviation safeguarded/protected surfaces due to the presence of the substation/converter station.	Inappropriate siting of large-scale buildings may impact on radio and radar communications through the blocking of signals or lead to the false identifications of aircraft structures. Considerations on the locations of developments should be undertaken in line with consultations with the competent and statutory authorities prior to the construction of the substation/converter station commencing to minimise the potential for impacts.
	Other Users: Road Network Users	



SEA Topic	Potential Impact	Proposed Mitigation
	Effects on the road network during construction and decommissioning (e.g., increased traffic, delays, impacts on public transport, road closures).	Development of good site management practices, traffic and construction management plans and consultation with the competent and statutory authorities prior to any works commencing should enable all impacts to be kept to a minimum over a short timescale. Minimise the frequency and duration of road closures. Adoption of Construction Best Practice.
	Other Users: Military Activities	
	Risk of UXO presence during construction.	Areas of known live military firing or munitions disposal should be avoided during the next stage of consideration, prior to project development, At the project stage, mitigation should follow appropriate procedures for the management/removal of UXO e.g., Crown Estates 2006 (TCE, 2006) (Dealing with munitions in marine aggregates), DEFRA 2025, Reducing Marine Noise (DEFRA, 2025), UK Government 2025, Marine environment: unexploded ordnance clearance: Joint Position Statement (UK Government, 2025).
	Temporary disruption of military exercises and activities during construction and decommissioning phases. Long-term disruption of military exercises and activities due to activities required to operate and maintain the substation/converter station.	During the project planning phase, mitigation must aim to avoid jeopardising national security unless the impacts are appropriately mitigated or deemed acceptable in consultation with the MoD.
	Other Users: Tourism	
	Temporary impacts on coastal and onshore tourism activities with the generation of noise and visual impacts and potential release of contaminants during construction/decommissioning phases.	Mitigation during the project planning phase to avoid coinciding with the most disruptive periods of construction/decommissioning with high seasonality periods for tourism. Mitigation as set out under Population and Human Health topic for potential impacts on local populations and leisure and recreation, including disturbance and collision risk.

SEA Topic	Potential Impact	Proposed Mitigation
	Temporary impacts with the loss of access to areas during construction/decommissioning phases.	Mitigation as set out under Water topic for potential pollution impacts to waterbodies. Mitigation as set out under Landscape, Seascape and Visual Amenity topic for potential visual impacts.
	Long-term effects on visitor numbers to the area due to the presence of the substation/converter station (e.g. access, effects on the landscape). Long-term to permanent impacts with the loss of access to areas due to activities required for operation and maintenance.	Mitigation during the project planning phase to avoid areas of high importance for tourism. Mitigation as set out under Landscape, Seascape and Visual Amenity topic for potential visual impacts during operation.
Cultural Heritage	Offshore Cabling	
	Archaeology and Wrecks	
	Loss of, or damage to wrecks or submerged archaeological artefacts during cable installation, maintenance, and decommissioning. Indirect damage or degradation of archaeological sites or features due to sedimentation impacts during construction/decommissioning.	At the construction, operation/maintenance and decommissioning stages, actions should be taken to safeguard known heritage assets, and to consider and mitigate against the potential to damage or disturb as yet undiscovered heritage assets in the marine environment. For assets in England, baseline datasets to support projects can be found at Historic England's Open Data Hub which includes National Heritage List for England data and the Historic Environment Records provide access to comprehensive and dynamic resources relating to the archaeology and historic built environment of a defined geographic area and are regularly updated. The MDE Heritage Accelerator project (https://historicengland.org.uk/advice/planning/infrastructure/renewable-energy/accelerating-clean-energy-offshore/), is also significantly increasing the amount of heritage information available to inform marine development. Mitigation during the project planning phase to identify sites of interest for archaeological potential and use exclusion zones around these areas. Mitigation may include relevant surveys before potentially damaging activities occur, with survey results informing further

SEA Topic	Potential Impact	Proposed Mitigation
		mitigation to ensure sensitive seabed surface or subsurface features are avoided. Use of geophysical surveys to identify previously unknown wreck locations within development areas and cable routes, with notification and submission of artefacts, potential archaeological and vessel remains to suitable authorities in line with the Protection of Wrecks Act (1973) (as amended in Scotland under the Marine (Scotland) Act 2010 replaced under a system of historic marine protected areas), within GB territorial waters within 12 miles of shore. Heritage assets may also be found beyond the 12 miles of the shore however these cannot be designated but require consideration. Adherence to Historic England, Royal Commission on the Ancient and Historical Monuments of Wales and Historic Environment Scotland with consultation to key stakeholders e.g., the Ancient Monuments and Archaeological Areas Act 1979. Consultation with qualified archaeologists during project planning phase for the suitable design and construction of developments with the requirement for statutory consents for works. A Written Scheme of Investigation (WSI) is a project specific, formal and live document which forms the agreement between archaeologists and the developer regarding detail on the archaeological method statements and ensure archaeological work occurs pre- and post-consent. This also includes recording information such as public archiving duties. Protocols for Archaeological Discoveries (PADs) are systems of monitoring for unexpected or incidental finds relating to the historic environment, these should be used at all stages of the development process where any archaeological information may be obtained (TCE, 2014). PADs include specific mitigation measures and protocols to be followed for the recovery and locating of discoveries. Within England and Wales, archaeological objects must be reported to the relevant local Finds Liaison Officer or if this is a wreck to the Receiver of Wreck within 14 days of recovery. Within Scotland, finds must be reported to Treasure Trove, Scotland. Mitigation during the project planning phase as part of general environmental assessments to undertake coastal process assessment to assess potential effects of construction/decommissioning on sediment dispersion and transport and modelling of these changes to

SEA Topic	Potential Impact	Proposed Mitigation
		determine potential effects on surrounding archaeological sites or features.
	Damage or degradation of archaeological sites or features with the potential for scouring and exposure to occur around cable protection.	As above, mitigation during the project planning phase to identify sites of interest for archaeological potential and use exclusion zones around these areas. Undertaking coastal process assessment to assess potential effects from installed cable protection on sediment dispersion and transport and modelling can help to identify potential impact areas on a wider basis.
	Coastal Heritage	
	Short-term effects on the setting of designated and non-designated coastal heritage sites due to the presence of vessels and machinery during construction and decommissioning phases.	Mitigation during the project planning phase with consideration of the impacts of settings on historical assets within the project-level assessment, and the management of cultural heritage through the development and application of a Marine Archaeology Reporting Plan (MARP). Consultation with qualified archaeologists/architects during project planning phase for the location of cable routes with the requirement for statutory consents for works.
	Onshore Cabling	
	Terrestrial Archaeology and Heritage	
	Loss of, or damage to archaeological artefacts during cable installation, maintenance, and decommissioning. Indirect damage or degradation of archaeological sites or features during construction and decommissioning (e.g., due to sedimentation impacts, vibration, changes to hydrology).	Where necessary a heritage impact assessment should be prepared in respect of any works to architectural or archaeological features in advance of any works being carried out to feed into detailed design. Consultation and agreement with Historic England, Royal Commission on the Ancient and Historical Monuments of Wales, Historic Environment Scotland in advance of any works taking place in respect of protected archaeological or architectural features. Construction supervision by qualified project archaeologists, combined with sensitive construction methods and restoration to minimise potential for damages, in potentially sensitive areas. Heritage features damaged could be restored / preserved. Statutory consents and notices may be required prior to works taking place. All new archaeological discoveries are reported in line with legislative requirements.
	Temporary effects on the setting of archaeological and	Impacts could be kept to a minimum through sensitive design and planning. Planning and design advice from

SEA Topic	Potential Impact	Proposed Mitigation
	heritage features or sites during cable construction, maintenance and decommissioning. Long-term effects on the setting of features or sites if landscape features are not re-established following construction.	qualified archaeologists / architects. Statutory consents may be required prior to works.
	Onshore Substations / Converter Stations	
	Terrestrial Archaeology	
	Loss of, or damage to archaeological artefacts during construction, maintenance, and decommissioning. Indirect damage or degradation of archaeological sites or features during construction and decommissioning (e.g., due to sedimentation impacts, vibration, changes to hydrology).	Where necessary, a heritage impact assessment should be prepared in respect of any works to architectural or archaeological features in advance of any works being carried out to feed into detailed design. Consultation and agreement with Historic England, Royal Commission on the Ancient and Historical Monuments of Wales, Historic Environment Scotland in advance of any works taking place in respect of protected archaeological or architectural features. Construction supervision by qualified project archaeologists, combined with sensitive construction methods and restoration to minimise potential for damages, in potentially sensitive areas. Heritage features damaged could be restored / preserved. Statutory consents and notices may be required prior to works taking place. All new archaeological discoveries are reported in line with legislative requirements. Full assessment and modelling, where required, to determine potential for indirect impacts through alterations to hydrology or sediment regimes.
	Temporary effects on the setting of archaeological and heritage features or sites during construction, maintenance and decommissioning.	Where necessary, a heritage impact assessment should be prepared in respect of any works to architectural or archaeological features in advance of any works being carried out to feed into detailed design. Consultation and agreement with Historic England, Royal Commission on the Ancient and Historical Monuments of Wales, Historic Environment Scotland, construction machinery should be kept to the minimum required to reduce the potential for effects on setting.

SEA Topic	Potential Impact	Proposed Mitigation
	Terrestrial Heritage	
	Loss of, or damage to heritage features during construction, maintenance, and decommissioning. Indirect damage or degradation of features during construction and decommissioning (e.g., due to sedimentation impacts, vibration, changes to hydrology).	Where necessary a heritage impact assessment should be prepared in respect of any works to architectural or archaeological features in advance of any works being carried out to feed into detailed design. Consultation and agreement with Historic England, Royal Commission on the Ancient and Historical Monuments of Wales, Historic Environment Scotland in advance of any works taking place in respect of protected archaeological or architectural features. Construction supervision by qualified project archaeologists, combined with sensitive construction methods and restoration to minimise potential for damages, in potentially sensitive areas. Heritage features damaged could be restored / preserved. Statutory consents and notices may be required prior to works taking place. All new archaeological discoveries are reported in line with legislative requirements. Full assessment and modelling where required to determine potential for indirect impacts through alterations to hydrology or sediment regimes.
	Temporary effects on the setting of heritage features or sites during construction, maintenance and decommissioning. Long-term effects on the setting of features or sites during operation of the substation/converter station.	Where necessary a heritage impact assessment should be prepared in respect of any works to architectural or archaeological features in advance of any works being carried out to feed into detailed design. Consultation and agreement with Historic England, Royal Commission on the Ancient and Historical Monuments of Wales, Historic Environment Scotland, construction machinery should be kept to the minimum required to reduce the potential for effects on setting. Considerations on visual and setting impacts and need for screening to minimise impacts should be undertaken for the settings of features or sites, subject to appropriate project level considerations of the local area.
Landscape, Seascape and Visual Amenity	Offshore Cabling	
	Short-term effects on seascape and visual amenity from activity of vessels and machinery and the use of artificial lights during construction, maintenance and	Mitigation during planned construction, maintenance or decommissioning activities with ensuring that visual impacts are constrained around the development area, wherever possible, and do not spread into unnecessary areas. Limited mitigation measures are available beyond ensuring that the number of vessels/machinery and planned lighting is the minimum required and is carefully planned not to exceed requirements for activities to induce additional visual impacts.

SEA Topic	Potential Impact	Proposed Mitigation
	decommissioning phase of cabling.	
	Onshore Cabling	
	Short-term effects on landscape from activity of vehicles and machinery and the use of artificial lights during construction, maintenance and decommissioning phase of cabling. Long-term effects on the landscape if features are not re-established following construction.	Impacts could be kept to a minimum through good site practice and planning (e.g., screened laydown areas and traffic management). Adoption of Construction Best Practice. Landscape and Visual Assessment of options at the detailed feasibility and detailed planning stages to minimise the potential for impacts and provide site specific mitigation measures, this may involve the use of screening to reduce the long-term impacts of development or ensuring the restoration of habitats to previous conditions following cable installation.
	Temporary effects on visual amenity and viewpoints during construction due to the presence of construction vehicles and machinery and loss of landscape elements.	Mitigation during planned construction, maintenance or decommissioning activities with ensuring that visual impacts are constrained around the development area, wherever possible, and do not spread into unnecessary areas. Limited mitigation measures are available beyond ensuring that the number of vessels/machinery and planned lighting is the minimum required and is carefully planned not to exceed requirements for activities to induce additional visual impacts.
	Onshore Substations / Converter Stations	
	Effects on landscape elements, including permanent loss in the footprint of the substation/converter station and temporary in the surrounding area (e.g., access routes).	Impacts could be kept to a minimum through sensitive design and planning (e.g., vegetative screening and landscape management planning). Landscape and visual assessment and advice during detailed design. Public consultation on draft designs. Landscape and Visual Assessment of options at the detailed feasibility and detailed planning stages to minimise the potential for impacts and provide site specific mitigation measures.
	Effects on landscape character, including temporary impacts during construction and long-term impacts due to the presence of the	Landscape and Visual Assessment of options at the detailed feasibility and detailed planning stages to minimise the potential for impacts and provide site specific mitigation measures dependent upon the specific landscape characteristics of an area.

SEA Topic	Potential Impact	Proposed Mitigation
	substation/converter station.	
	Temporary effects on visual amenity and viewpoints during construction due to the presence of construction vehicles and machinery and loss of landscape elements. Potential for long-term effects on visual amenity and viewpoints due to the presence of the substation/converter station.	Areas of highest landscape and seascape sensitivity should be avoided, where possible, during the next stage of consideration, prior to project development. At the project planning phase, a Landscape and Visual Impact Assessment (LVIA) should be undertaken and should inform project design and appropriate mitigation.

Table 4: Proposed SEA Mitigation Measures

3.3.2 HRA Mitigation

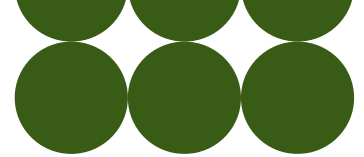
3.3.2.1 Plan-Level Mitigation

The HRA report has identified that, given the uncertainties associated with the HND Implementation Plan, Plan-level mitigation measures are required to ensure that there is no AEoSI. This includes the following measure identified as integral to the draft Plan:

- The legal requirement for individual projects to undergo HRA. All future developments within the HND and HND FUE corridors will be required to undergo an HRA and, wherever the possibility of a likely significant effect on a European site cannot be excluded, a project-level Appropriate Assessment will need to be completed.

The Plan-level HRA is not a substitute for project-level HRAs, where these are required for individual projects; the HRA process will still be required in accordance with legislation. The HRA considered that this requirement for a project level Appropriate Assessment, where a possibility for a Likely Significant Effect (LSE) is identified, is an important mitigation measure at Plan-level to ensure that there is no AEoSI for designated sites once there is the required certainty about development location(s) and design.

For individual cable projects a range of mitigation measures can be applied to help reduce or offset ecological effects where needed and were identified in the HRA report and linked to particular European sites and route corridors on a precautionary basis. These are relatively standard mitigation approaches that have been effectively deployed in many development contexts including marine and terrestrial electricity cable



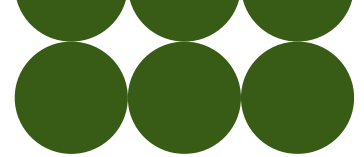
construction, maintenance and decommissioning. While the measures can be identified in broad terms for the Plan-level HRA, their precise requirement, and their details, will need to be developed for each individual project application HRA and will be linked to specific survey and other investigations. Of these measures, an overarching consideration, and the one that is also most intuitive, is that during the early stages in the design of any development, 'a primary consideration will be to try to avoid habitats within a European/Ramsar site and minimise exposure and risk'. Given that the route corridors are 5km wide, the HRA frequently identifies that there is potential for many impacts on European sites to be avoided entirely through either careful routing or careful location of the landfall. In many instances where the entire 5km corridor traverses a European site at landfall, use of trenchless techniques has been identified as a potential solution. However, this should be considered a mitigation method rather than an avoidance technique as trenchless techniques can still have impacts on the European sites that they pass beneath, depending on the sensitivities of the European site and construction details.

Therefore, while the range of project-level mitigation measures that are available is identified, they do not, by themselves, provide further certainty that any European/Ramsar site or features will not be affected. This is because they are not a formal requirement of the HND Implementation Plan, and they are too generic at this stage to be assured that there will be no adverse effects as a result of their application. However, coupled with consideration in the HRA of whether there is room within each route corridor to avoid particular European sites, the identified mitigation measures do give a strong indication as to whether the corridors identified in the HND Implementation Plan have sufficient flexibility that it is likely to be possible to deliver each route corridor at a project level without any adverse effect on the integrity of European sites.

For the pathway of direct benthic or intertidal habitat loss, the HRA identified several route corridors where there is a high likelihood that a reliance on the derogations in the HRA process (the tests of Imperative Reasons of Overriding Public Interest, No Alternatives and Compensation) would be required at the project level. These are PA_1 to Birkhill Wood, R4_1 to Birkhill Wood, R4_2 to Birkhill Wood and SW_N4 to Arnish.

The HRA recommended that a suite of environmental design principles is developed following adoption of the HND Implementation Plan that would be implemented at individual project stage to further limit impacts to the environment. These could include, but not limited to:

- Minimise environmental impact
- Avoid European sites that are avoided in the HND Implementation Plan
- Avoid sensitive features that are avoided in the HND Implementation Plan
- Reduce cable lengths
- Reduce external cable protection
- Reduce cable crossings



- Location of offshore infrastructure outside of European sites/sensitive features
- Consideration of sediment processes (to include any additional impacts from external cable protection)
- Avoid sensitive periods for European site features
- Detailed mitigation measures at the project level can be set out within the design documents and alternatives assessment, but in particular in Registers of Environmental Actions and Commitments and CEMPs.

3.3.2.2 Project-Level Mitigation

The HRA report identified that any new project for a study corridor identified in the HND Implementation Plan would legally be required to undergo a project-level HRA where the possibility of an LSE on a European/Ramsar site cannot be excluded. The HRA report also identified that developers are not legally, spatially or technically bound by the route corridors identified in the HND Implementation Plan. However, all projects would be required to review baseline conditions and ensure that work does not lead to any AEoSI unless they can demonstrate to the satisfaction of the appropriate competent authority (permitting body) and appropriate authority (relevant Secretary of State or Administration) that the derogation tests completed by the HRA can be passed.

At Plan level, many sites within the impact pathway screening distances (including those that overlap directly with the proposed cable corridors (e.g. Carmarthen Bay SAC)) were given an amber risk rating due to the fact that mitigation measures could be put in place to avoid adverse impacts on site integrity and features. However, at this stage it was not possible to completely rule out AEoSI that could occur at the project level (especially where there are uncertainties on route options and given that there will be site-based engineering constraints). Any technology or configuration change that materially alters environmental pathways, including High-Voltage Alternating Current (HVAC) phasing that increases cable numbers, trenches and landfalls relative to High-Voltage Direct Current (HVDC) assumptions, should be screened promptly through the Impact Assessment process and taken through proportionate HRA refresh where necessary.

The HRA report set out information to aid future project-level Appropriate Assessments. All future project-level down-the-line HRA work will need to be completed in the context of the latest scientific knowledge and evidence base (relating to the development of electricity cable routes) that is available at the time of the assessment. It will also need to be done to the satisfaction of the consenting body (as competent authority at the project stage), taking account of advice from statutory nature conservation bodies, and consultees where appropriate. The pursuance of project-level HRAs (with reference to the latest monitoring and scientific understanding) will be a legal requirement in all cases where likely significant effects cannot be excluded as will the application of project-level mitigation (where these are necessary to avoid adverse effects at project level). This work will provide assurances of no adverse effect from individual projects but will also improve understanding of the impacts from key pathways, with updated information fed back into



the HRA process i.e. through subsequent applications. The information that will need to be supplied within the project-level HRAs includes:

- Updates on the location and status of new European designations.
- New information on interest feature sensitivities (in the context of the latest scientific understanding).
- Assessment of effects during survey, construction and operational phases of the project (including the in-combination effects with other plans or projects).
- Proposed mitigation measures.

The HRA report stated that it should also be recognised that it may be necessary, as part of the project-level HRAs, to revisit the screening process that was undertaken for the HND Implementation Plan. Depending upon the outcome of the project-level Appropriate Assessment there might be a need for mitigation measures to be implemented to ensure that there is no AEoSI. This process will also require project-level Derogations to be prepared for DCOs at project level.

Table 5 shows the range of project-level mitigation measures proposed in the HRA report.

HRA Mitigation Measures

Potential Impact	Proposed Mitigation
Temporary physical disturbance of subtidal and/or intertidal habitats	Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Detailed route development and micro-routing within the study corridor, following best practice guidance (JNCC & Natural England, 2022), and informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints; including minimising the footprint as much as possible, and targeting seabed habitats that are known for quicker recovery times, where practicable. A Vehicle Management Plan, which identifies sensitive habitats and adheres to best practice to avoid damage to these. For example, identifying vehicle routes, briefing staff on site sensitivities, and identifying pollution control measures. The specific locations where the cable will land have not been shown in detail. When the specific location has been decided sediment samples should be taken in the location of any potential sediment disturbance or cable burial. Survey is not mitigation but will inform any detailed measures in a CEMP, Register of Environmental Actions and Commitments or similar.



Potential Impact	Proposed Mitigation
	Consideration of the cable trenching method with the smallest Zone of Influence (Zol). Consideration of the requirement and extent of for pre-lay grapnel runs and sand wave lowering.
Permanent loss of seabed of intertidal habitats	The following measures have the potential to avoid and/or reduce the permanent loss of seabed or intertidal habitats: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. An assessment of the impacts of climate change on the exposure of the cable through a Cable Burial Risk Assessment. Ensuring that cables are buried to a sufficient depth would avoid cable exposure later and the potential need for cable protection. Consideration of the longevity of the cable protection and decommissioning intentions should be given at the design stage. For example whether long term impacts can be reduced through the use of removable materials (the following study reviewed cable protection options and their removability at end of life). Detailed route development and micro- routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Nature-inclusive design measures; Where possible, cable protection materials could be selected to match the environment (e.g. when cables are installed in areas of cobbles or other natural rock features, rock of similar diameter and material as the receiving environment could be used as an alternative to artificial materials, such as concrete matressing). Mitigation would need to account for any changes in physical processes and sediment transport regimes as a result of rock armour / mattress placement on the seabed. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar.
Temporary disturbance as a result of increased suspended sediment concentrations and sediment deposition	The following measures have the potential to avoid and/or reduce the impact of SSC and sediment deposition on marine receptors. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this



Potential Impact	Proposed Mitigation
	strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Detailed route development and micro-routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of the cable trenching method with the smallest Zol. Consideration of the requirement and extent of pre-lay grapnel runs and sand wave lowering.
Changes in water quality	The following measures have the potential to avoid and/or reduce the impact of changes in water quality. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Consideration of timings of works, especially in close proximity of natal rivers and breeding sites. CEMP including an Emergency Spill Response Plan and Waste Management Plan during the installation phase of each individual project to minimise releases. Appropriate HSE procedures (identified in the CEMP), with strict weather and personnel limits to reduce any risk of accidental spillage. Response plans, including control measures and SOPEP in place and adhered to under MARPOL Annex I requirements for all vessels. Planned effluent dischargers compliant with MARPOL Annex IV 'Prevention of Pollution from Ships' standards. Drilling fluids selected from the OSPAR List of Substances/Preparations Used and Discharged Offshore (2021) which are Considered to Pose Little or No Risk to the Environment.
Introduction of INNS to subtidal benthic habitats and species	A number of industry best practice mitigations would lower the probability of INNS transmission to benthic habitats and thus reduce the risk of significantly affecting a European site whether in the marine, intertidal or terrestrial environment. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: All project vessels should adhere to the IMO Guidelines for the control and management of ship' biofouling, and the International Convention for the Control and Management of



Potential Impact	Proposed Mitigation
	Ships' Ballast Water and Sediments, to minimize the transfer of invasive aquatic species. Any material introduced into the marine environment, such as rock protection material, should be from a suitable source to ensure no INNS can be introduced. Ultimately, a biosecurity plan should be produced by the applicant for each project once a planning application is being devised, following the latest guidance on INNS from the Great Britain Non-Native Species Secretariat. This can be adopted across all cable route projects, at Plan level, to reduce the overall risk of INNS introductions. With the adherence to these guidelines and measures, INNS introductions would be considered unlikely, with any impacts limited to individual cable route corridors. Thus, significantly reducing the likelihood of significantly adverse effects on a designated site.
EMF impacts	Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Detailed route development and micro-routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of the need for EMF modelling, to inform design. Consideration of the configuration of multiple cables. Consideration of the required depth of lowering to minimise EMF emissions.
Potential effects due to subsea cable thermal emissions	Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Detailed route development and micro-routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localise engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of the need for thermal modelling, to inform design.



Potential Impact	Proposed Mitigation
Impacts to marine mammals and fish from underwater sound	The following measures have the potential to avoid and/or reduce the impact of underwater sound on marine receptors. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Consideration of the JNCC guidelines for minimising the risk of injury to marine mammals from geophysical surveys (JNCC, 2017). Refer to and draw upon the Defra Noise Policy package 2025, which aims to reduce the impact of noise on marine environments and marine life. Consideration of the need for underwater sound modelling, to inform design; and Consideration of the need for Marine Mammal Observation. As detailed in Natural England's best practice guidance (Parker <i>et al.</i>, 2022) it is advised that an MMMP is submitted alongside DCO applications; detailing the mitigation measures implemented as part of any project where marine mammals may be affected. As noted by the Marine Directorate in Scotland, European Protected Species (whales, dolphins and porpoise) and basking sharks require a license for disturbance separate to the marine licensing process of the Marine Directorate.
Barriers to migration	The following measures have the potential to avoid and/or reduce the impact of barriers to migration on marine receptors. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Detailed route development and micro-routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of the need for EMF modelling, to inform design. Consideration of the configuration of multiple cables (e.g. bundled).



Potential Impact	Proposed Mitigation
	Consideration of the required depth of lowering to minimise EMF emissions. Consideration of potential migratory routes of diadromous fish (e.g. river mouths). The application of seasonal restrictions during construction can also avoid the impact entirely, should the migratory fish be qualifying features of a traversed designated site.
Changes in prey availability	The following measures have the potential to avoid and/or reduce the impact of changes in prey availability if implemented by the applicant at the time a planning consent is granted. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Habitat/prey mapping and consideration of timing to avoid key biological periods/locations to reduce impact on prey species. Use of certain construction methods to avoid or minimise impacts and disturbance such as use of trenchless methods like Horizontal Direct Drilling to traverse the intertidal environment, particularly habitats such as saltmarsh or reefs. Creation or enhancement of alternative freshwater or terrestrial habitat (if the foraging habitat in question lies outside the boundary of a European site) to ensure no net loss in foraging resource. Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Detailed route development and micro-routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible.
Collision risk with vessels	The following measures have the potential to avoid and/or reduce the risk of collision with vessels and marine mammals and should be deployed by applicants as necessary during construction of their schemes, in accordance with best practice; a more detailed approach would need to be devised for individual planning applications and DCOs. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this



Potential Impact	Proposed Mitigation
	strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible. Project vessels to comply with the International Regulations for Preventing Collisions at Sea 1972. Development of a Vessel Management Plan at project-level to support compliance with the International Regulations for Preventing Collisions at Sea 1972, including specifying a maximum vessel speed for each vessel. Deploy marine mammal observers on vessels to help prevent collisions with marine animals. Consider the number of vessels required relative to the existing marine traffic. Reduce the speeds undertaken by vessels. Reduce the number and frequency of vessels transiting between port and the installation/ maintenance site.
Airborne sound and visual disturbance to marine mammals and seabirds	The following measures have the potential to avoid and/or reduce the impact of airborne sound and visual disturbance on marine receptors. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Considering lighting and the spectrum of lighting on vessels operating at night during key foraging and migratory periods. Adjusting vessel transit speeds when some species are visible, particularly razorbill or guillemot. NatureScot have indicated this is particularly likely to be required for works occurring within the Outer Firth of Forth and St Andrews Bay Complex SPA if there is temporal overlap with the flightless moult period of razorbills and guillemots from mid-August to the end of October. Other seasonal restrictions, particularly on works within 2km of red throated diver and 2.5 km of common scoter. JNCC when consulted over an earlier version of the HRA report advised that works occurring within or around SPAs designated for common scoter and/or red-throated diver are carried out outside of their wintering period. This will vary slightly for each European site, and the list below is not comprehensive (it does not include Carmarthen Bay SPA, for example): • Greater Wash SPA – from September to April for both common scoter and red-throated diver. • Liverpool Bay SPA – from November to March for both common scoter and red-throated diver



Potential Impact	Proposed Mitigation
	- Outer Firth of Forth and St Andrews Bay Complex SPA – from September to March for red-throated diver, from July to April for common scoter. - Outer Thames Estuary SPA – from October to May for red-throated diver. Should this not be possible then a vessel disturbance assessment should be carried out to inform further analysis. Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level, such as avoiding designated sites, and the need to cross third-party infrastructure, as far as possible; Micro-routing to avoid seal haul outs overlapping with the ZOI; and Lighting on-board the vessels can be kept to the minimum level required to ensure safe operations and directed towards working areas.
Noise and visual disturbance of birds from landfall/onshore works	Whether the impacts are likely to arise on birds (as detailed in Table 20 of the RIAA), or bats or otters, the approach to addressing potential adverse effects on integrity will be similar, although assessment thresholds will differ. Mitigation is likely to take three forms. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar: Physical avoidance – since the corridors are 5km wide this provides ample opportunity for most corridors to locate the actual construction swath (including any new substation or converter station) sufficiently far away from the site to avoid disturbance (e.g. at least 300m away for birds). Temporal avoidance – for some sites it may be possible to time the most disturbing works (e.g. HDD) to take place outside sensitive periods. This is likely to be more possible for birds and bats than for otter, as bats hibernate during the winter and many SPAs are designated for either non-breeding or breeding birds. For sites designated for non-breeding birds avoiding the most disturbing works between October to March may avoid any adverse effect on integrity. For sites designated for breeding birds the season will vary and will need to be confirmed on a case-by-case basis, but the core season is usually March to June. For sites designated for both breeding and non-breeding birds, temporal avoidance may not be possible. Mitigation – this essentially involves reducing the noise and visual disturbance experienced by the bird or other wildlife to a level that is not significantly disturbing. This could involve the use of a different construction method. It may also involve ensuring visual

Potential Impact	Proposed Mitigation
	screens and noise barriers are installed between the relevant works and the SPA, and/or fitting features to noise-generating plant and lighting fixtures to reduce the noise or light generated. It should be noted, however, that depending on noise/light levels during construction and proximity to European sites it may not be possible to reduce noise and light levels to a sufficient degree to avoid significant disturbance. For example, British Standard guidance generally indicates that conventional noise fencing may only reduce noise levels by up to 10dB, while other types of mitigation (e.g. enclosing an HDD drive site in a housing) may achieve reductions of 20dB. In these circumstances physical or temporal avoidance may be the only solution.
Risk of bird strike from onshore overhead line	Mitigating birdstrike incidents with overhead line (OHL) is imperative to minimise adverse effects on the designated avian populations. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar. If new OHL is going to be constructed, design modifications are essential for mitigation; incorporating avian-friendly features like bird flight diverters (which can include moving diverters and those which absorb light during the day and emit it at night for low visibility situations and nocturnal movements), perch deterrents, and insulator covers to reduce collision risks and discourage perching (Ferrer, 2020). Enhancing OHL visibility through markers and reflective materials is crucial to alert birds and diminish collision risks (NatureScot, 2016). Strategic undergrounding of cables, particularly in areas with high avian activity or ecologically sensitive habitats, eliminates collision risks altogether. Vegetation management could be implemented to control plant growth near OHL, reducing perching opportunities for birds. Installing raptor perch deterrents and bird flight diverters along OHL further discourages avian interactions (Slater & Smith, 2010). Site-specific impact assessments are important to identify areas with increased avian activity and tailor mitigation measures accordingly.
Temporary or permanent loss or removal of terrestrial and intertidal habitats	In general, when undertaking detailed design for the purposes of planning application and DCO landfalls should avoid European site boundaries and only occur within site boundaries if it can be shown that other options will not deliver the objectives of the project. If landfall will occur within a site, this and the corridor continuation within the European site, should be undertaken using trenchless techniques such as HDD, with the compounds and HDD pits located outside the site boundary and/or the intertidal zone. There would need to be a geotechnical investigation regarding the use of trenchless techniques to ensure that it can be installed

Potential Impact	Proposed Mitigation
	without any risk of collapse of the surface substrate. If landfall will occur within a site, the surface permanent infrastructure should be located outside the site boundary unless it can be situated within 'site fabric'. It can be seen from Table 22 of the RIAA that one corridor is considered not to be able to avoid adverse effects on the integrity of a European site and will therefore require derogations based on available information. This is SW_N4_to_Arnish_(Lewis) which cannot avoid adverse effects on Lewis Peatlands SPA either due to direct habitat loss or indirect habitat loss through impacts on hydrology.
Terrestrial functionally linked habitat impacts	As relevant schemes are developed further for planning applications and DCOs, those identified as having potential AEOI for otters (i.e. Corridors Ballantrae_to_Pentir, SW_N1_to_Spittal, Shetland_to_Blackhillock, SW_Elc_2_to_Weston Marsh, SW_N2_to_Near_Dounreay, SW_N3_to_Arnish and PDA1_to_Llandyfaelog) and Corridor Ballantrae_to_Pentir for lesser horseshoe bat (<i>Rhinolophus hipposideros</i>) would need to undertake the following: For otters, surveys would be required for the planning application to identify their presence where suitable habitats to be affected. Where necessary to preserve such habitats, appropriate construction techniques (such as trenchless techniques for buried cables across significant watercourses) would need to be implemented. Where this was not possible or appropriate within the context of the scheme (such as with some ditches) then alternative habitat may need to be provided and steps taken to ensure no loss of connectivity for otters. For lesser horseshoe bats, any scheme will need to undertake bat surveys and, if lesser horseshoe bats are found, either preserve key habitats such as tree lines, roosts, and hedgerows or species-rich meadows (such as careful working practices, trenchless techniques and habitat restoration immediately following works) or offset impacts by enhancement of other areas or provision of replacement roosts (where roosts are directly affected). Where corridors are identified as lying within the ZoI for functionally-linked land impacts on SPA birds as set out in Natural England Impact Risk Zone guidance or other guidance such as that produced by NatureScot, the following procedures will need to be followed: Firstly, bird survey (typically two years) at the relevant time of year will be required of the affected area to confirm the bird use of the site.



Potential Impact	Proposed Mitigation
	If the fields in question regularly support approximately 1% of the SPA population or above, they are classed as functionally-linked habitat. Note that this does not necessarily mean that fields supporting less than 1% of an SPA population are not functionally-linked land (e.g. for rare species such as golden plover, even land supporting less than 1% of the SPA population may be important) but the 1% threshold can provide a useful starting point. Where possible these fields should be avoided, particularly by permanent infrastructure. If it is not possible to avoid them it will be necessary to offset the loss through the creation/enhancement of alternative habitat to ensure no overall net loss of available resource. Measures would be included in a CEMP, Register of Environmental Actions and Commitments or similar.

Table 5: HRA Proposed Project-Level Mitigation Measures

3.3.3 MCZ Mitigation

3.3.3.1 Plan-Level Mitigation

The Stage 1 MCZ assessment determined the impact pathways that could affect MCZs, HPMAs and NCMPAs, noting that, as the final cable designs and methodologies are not yet defined, there remains potential for many effects on MCZ protected features from cable installation, operation, and maintenance, and decommissioning to be reduced, or possibly avoided altogether through additional mitigation commitments embedded within each individual cable project design. The Stage 1 MCZ report set out specific mitigation measures, which should be considered on a case-by-case basis by each project, as appropriate, as these projects develop.

The potential impact pathways identified by the Stage 1 MCZ are as follows:

- Temporary physical disturbance – subtidal benthic habitats and species.
- Permanent loss – subtidal benthic habitats and species.
- Introduction of INNS – subtidal benthic habitats and species.
- Changes in prey availability.
- Collision risk – marine mammals.
- Thermal emissions – subtidal benthic habitats and species.
- EMF – subtidal benthic habitats and species, marine mammals, fish, and invertebrates.



- Airborne sound and visual disturbance – marine mammals and birds.
- Underwater sound – marine mammals, fish, and shellfish.
- Increased suspended sediment concentrations – subtidal benthic habitats and species, marine mammals, fish, and invertebrates.
- Water quality – subtidal benthic habitats and species, marine mammals, fish, and invertebrates.
- Barriers to migration – migratory fish.

Developments are expected to follow the Mitigation Hierarchy Framework, prioritising measures resulting in the least effect on protected features. Where cable route corridors run directly through an MCZ, the projects should consider reducing the width of the study corridor to avoid entering the MCZ or, where this cannot be reasonably achieved, consider micro-siting the route corridor around sensitive and protected features within the MCZs. In the case of HPMA, it is highly unlikely that consent will be given from regulators should a cable route or its Zol for its associated pathways overlap a site's boundaries. Therefore, it is highly likely designs which avoid HPMA altogether, including the application of spatially appropriate impact buffer zones, will be required.

3.3.3.2 Project-level mitigation

The MCZ report proposed a range of project-level mitigation measures. These are shown in [Table 6](#).

MCZ Mitigation Measures

Potential Impact	Proposed Mitigation
Temporary physical disturbance – subtidal benthic habitats and species	The following measures have the potential to avoid and / or reduce the impact of temporary physical disturbance on marine receptors: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Detailed route development and micro-routing within the study corridor, following best practice guidance (JNCC & Natural England, 2022), and informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints; including minimising the footprint as much as possible, and targeting seabed habitats that are known for quicker recovery times, where practicable. Consideration of the cable trenching method with the smallest Zol.



Potential Impact	Proposed Mitigation
	Consideration of the requirement and extent of for pre-lay grapnel runs and sand wave lowering.
Permanent loss – subtidal benthic habitats and species	Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Detailed route development and micro-routeing within the study corridor, following best practice guidance (JNCC and Natural England, 2022), and informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Where possible, cable protection materials could be selected to match the environment (e.g. when cables are installed in areas of cobbles or other natural rock features, rock of similar diameter and material as the receiving environment should be used could be used as an alternative to materials such as concrete mattresses).
Increased suspended sediment concentrations – subtidal benthic habitats and species, marine mammals, fish, and invertebrates	The following measures have the potential to avoid and/or reduce the impact of SSC and sediment deposition on marine receptors: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Detailed route development and micro-routing within the study corridor, following best practice guidance (JNCC and Natural England, 2022), and informed by pre-installation evaluation of site-specific survey data and physical processes modelling to avoid or minimise localised engineering and environmental constraints; including minimising the footprint as much as possible, and installation that avoids fine sediments where possible. Consideration of the cable trenching method with the smallest Zol. Consideration of the requirement and extent of pre-lay grapnel runs and sand wave lowering.
Water quality – subtidal benthic habitats and species, marine mammals, fish, and invertebrates	The following measures have the potential to avoid and/or reduce the impact of changes in water quality: CEMP including an Emergency Spill Response Plan and Waste Management Plan during the installation phase of each individual project to minimise releases.



Potential Impact	Proposed Mitigation
	Appropriate HSE procedures (identified in the CEMP), with strict weather and personnel limits to reduce any risk of accidental spillage. Response plans, including control measures and SOPEP in place and adhered to under MARPOL Annex I requirements for all vessels. Drilling fluids selected from the OSPAR List of Substances/Preparations Used and Discharged Offshore (2021) which are Considered to Pose Little or No Risk to the Environment.
Introduction of INNS – subtidal benthic habitats and species	A number of industry best practice mitigations would lower the probability of INNS transmission to benthic habitats and thus reduce the risk of significantly affecting a habitats site: All project vessels should adhere to the IMO Guidelines for the control and management of ship’ biofouling, and the International Convention for the Control and Management of Ships’ Ballast Water and Sediments, to minimize the transfer of invasive aquatic species. Where possible, the number of locations where cable protection is required (i.e. the number of cable crossings) should be minimised. Any material introduced into the marine environment, such as rock protection material, should be from a suitable source to ensure no INNS can be introduced. Ultimately, it is considered industry best practice to produce a marine biosecurity plan / INNS management plan at project-level, following the latest guidance on INNS from the GB non-native species secretariat. This is increasingly becoming considered a requirement for offshore developments at project-level. With the adherence to these guidelines and measures, INNS introductions would be considered unlikely, with any impacts limited to individual cable route corridors. Thus, significantly reducing the likelihood of significantly adverse effects on a habitats site.
EMF – subtidal benthic habitats and species, marine mammals, and fish	The following measures have the potential to avoid and / or reduce the impact of EMF on marine receptors: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Detailed route development and micro-routing within the study corridor, following best practice guidance (JNCC and Natural England, 2022), and informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised



Potential Impact	Proposed Mitigation
	engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of the need for EMF modelling, to inform design. Consideration of the configuration of multiple cables (e.g., bundled). Consideration of the required depth of lowering to minimise EMF emissions.
Underwater sound – marine mammals, fish and shellfish	The following measures have the potential to avoid and/or reduce the impact of underwater sound on marine receptors: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Consideration of the best practice guidelines for minimising the risk of injury to marine mammals from geophysical surveys (JNCC, 2017). Consideration of the need for underwater sound modelling, to inform design; and Consideration of the need for Marine Mammal Observation. As detailed in Natural England's best practice guidance (Parker et al., 2022) it is advised that an MMMP is submitted alongside DCO applications; detailing the mitigation measures implemented as part of any project where marine mammals may be affected.
Barriers to migration – diadromous fish	The following measures have the potential to avoid and/or reduce the impact of EMF on marine receptors: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Detailed route development and micro-routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of the need for EMF modelling, to inform design. Consideration of the configuration of multiple cables (e.g. bundled). Consideration of the required depth of lowering to minimise EMF emissions.



Potential Impact	Proposed Mitigation
	Consideration of potential migratory routes of diadromous fish (e.g. river mouths).
Changes in prey availability – birds and marine mammals	The following measures have the potential to avoid and/or reduce the impact of changes in prey availability: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Detailed route development and micro-routing within the study corridor, informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of habitat and / or prey mapping to inform mitigation needs and / or micro routing as appropriate. Consideration of timing to avoid key biological periods / locations to reduce impact on prey species as appropriate.
Collision risk – marine mammals	The following measures have the potential to avoid and/or reduce the risk of collision with vessels and marine mammals: Adherence to standard best practice, including but not limited to: • Design of study corridors which optimise the balance of environmental, technical, commercial, and financial considerations, such as avoiding designated sites, as far as possible. • Deploy marine mammal observers on vessels to help prevent collisions with marine animals. • Consider the number of vessels required relative to the existing marine traffic. • Project vessels to comply with the International Regulations for Preventing Collisions at Sea 1972. • Reduce the speeds undertaken by vessels. • Reduce the number and frequency of vessels transiting between port and the installation/ maintenance site.
Airborne sound and visual disturbance – marine mammals and birds	The following measures have the potential to avoid and/or reduce the impact of airborne sound and visual disturbance on marine receptors, and are considered standard best practice: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level.



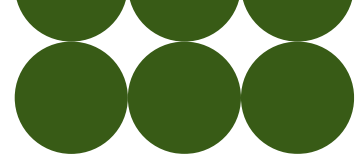
Potential Impact	Proposed Mitigation
	Implementing seasonal restrictions on certain installation, maintenance, and decommissioning activities, which avoid important breeding and wintering periods for certain bird species, and / or pupping and moulting periods for seal species. Micro-routing to avoid seal haul outs overlapping with the Zol. Lighting on-board the vessels can be kept to the minimum level required to ensure safe operations and directed towards working areas.
Thermal emissions – subtidal benthic habitats and species	The following measures have the potential to avoid and / or reduce the impact of thermal emissions on marine receptors: Raise the priority of environmental considerations to an equal footing with other, more-traditional considerations at this strategic level. Detailed route development and micro-routeing within the study corridor, following best practice guidance (JNCC and Natural England, 2022), and informed by pre-installation evaluation of site-specific survey data to avoid or minimise localised engineering and environmental constraints, including minimising the footprint as much as possible. Consideration of the need for thermal modelling, to inform design.

Table 6: MCZ Proposed Project-Level Mitigation Measures

4. How consultations have been taken into account in the Plan

- 4.1 Introduction
- 4.2 Stakeholder consultation
- 4.3 Public consultation on the draft HND Implementation Plan and associated SEA Environmental Report, HRA reports and MCZ report
- 4.4 Consultation regarding transboundary environmental effects
- 4.5 How consultation feedback has influenced the final HND Implementation Plan





4.1 Introduction

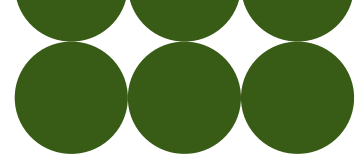
Throughout the development of the HND Implementation Plan, consultation has been undertaken at key points in the process. As discussed in Section 3.1, the HND methodology integrated environmental considerations as a core objective, and appraised options against four equal objectives: economical, deliverable/operable, community impact, and environmental impact, and the Plan was developed with key environmental stakeholders involved in consultation.

Consultation regarding the SEA Scoping report has been discussed in Section **Error! Reference source not found.** of this SEA Statement. The SEA Regulations require the SEA Statement to summarise how consultations under Articles of the Regulations that make reference to both public consultation and transboundary consultation, where required, have been taken into account in the Plan. This Section summarises key points regarding these consultations, and how they were addressed during the SEA process and preparation of the final HND Implementation Plan.

4.2 Stakeholder consultation

Key relevant stakeholders were involved and consulted throughout the series of offshore network design processes, which included the HND and HND FUE design exercises, as well as the development of the HND Implementation Plan, through the ESG. This involved the following members:

- Scottish & Southern Electricity Networks – Transmission (SSEN-T)
- Scottish Power Energy Networks (SPEN)
- National Grid Electricity Transmission (NGET)
- Department for Energy Security and Net Zero (DESNZ)
- Office of Gas and Electricity Markets (Ofgem)
- Scottish Government
- Marine Management Organisation (MMO)
- Department for Environment, Food and Rural Affairs (DEFRA)
- Joint Nature Conservation Committee (JNCC)
- Natural England (NE)
- NatureScot
- Natural Resources Wales (NRW)
- Scottish Environmental Protection Agency (SEPA)



- Historic Environment Scotland (HES)
- Historic England (HE)
- The Wildlife Trusts
- The Crown Estate (TCE)
- Crown Estate Scotland (CES)

This enabled key stakeholder opinions to be fully considered throughout the process.

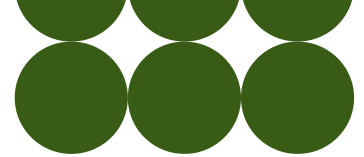
For future SEP engagement, the ESG has evolved and NESO will now be consulting with the Environment Working Group (EWG). The members of this group has been adapted to provide ongoing guidance and insight into Strategic Energy Planning (SEP), while ensuring they remain informed and engaged.

4.3 Public consultation on the draft HND Implementation Plan and associated SEA Environmental Report, HRA reports and MCZ report

The SEA Regulations (Section 13 of The Environmental Assessment of Plans and Programmes Regulations 2004 and The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, and Section 16 of the Environmental Assessment (Scotland) Act 2005, require that environmental authorities and the public must be given an opportunity to make submissions on a draft Plan and accompanying SEA Environmental Report prior to any final decision regarding the Plan.

NESO engaged in public consultation over a 13-week period from 3rd November 2025 until 30th January 2026. Public consultation comprised the following:

- The draft HND Implementation Plan, SEA Environmental Report, HRA reports and MCZ reports were made available digitally via the NESO website – <https://www.neso.energy/about/our-projects/offshore-coordination>. Consultees were invited to respond by using a linked Microsoft form. Questions on the consultation could be sent by email to box.enexternal@neso.energy or by post to Faraday House, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA.
- Notices were placed in the Press and Journal and the Scotsman.
- A hard copy of the consultation and associated documents was available to view upon request at NESO, Faraday House, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA.



The public consultation invited responses and comments from stakeholders and the public to the draft HND Implementation Plan and associated SEA Environmental Report, HRA reports and MCZ reports. During the public consultation period, responses were received from the following groups:

- Marine Management Organisation (MMO)
- Scottish Government
- Joint Nature Conservation Committee (JNCC)
- Natural Resources Wales (NRW)
- Natural England (NE)
- Historic Environment Scotland (HES)
- Historic England (HE)
- Scottish Fishermen's Federation (SFF)
- Kent Wildlife Trust (KWT)
- Scottish Power Renewables (SPR)
- Peterhead Developers Forum
- Thistle Wind Partners (TWP)
- Ocean Winds (OW)
- Offshore Wind Developer

In addition, several responses were received marked as confidential.

4.4 Consultation regarding transboundary environmental effects

The SEA Regulations require that, where a Member State considers that implementation of a Plan is likely to have significant effects on the environment within another Member State, or where another Member State likely to be significantly affected so requests, the Member State in whose territory the Plan is being prepared must, prior to Plan adoption, forward a copy of the draft Plan and SEA Environmental Report to the other Member State, who may indicate whether they wish to enter into consultation regarding the likely transboundary environmental effects of implementing the Plan.

No specific transboundary consultation was undertaken, as the HND Implementation Plan was not considered likely to give rise to transboundary environmental effects beyond GB.



4.5 How consultation feedback has influenced the final HND Implementation Plan

All submissions relating to the draft HND Implementation Plan and associated SEA Environmental Report, HRA reports and MCZ reports received during the public consultation period have been addressed as comprehensively as possible.

4.5.1 Amendments to the Plan as a result of Public Consultation

NESO has developed a response to the public consultation, entitled 'HND Implementation Plan – Response to feedback from public consultation'³. This report summarises the public consultation responses received, providing a broad synopsis of the key issues raised by respondents and how NESO has responded.

Amendments have been made to the final HND Implementation Plan as a result of the comments received from stakeholders during Public Consultation, and these are detailed in Appendix A and summarised in **Table 7**.

Plan-related consultation feedback

Key theme	Issue raised	Amendment(s) to the Plan
Strategic (Plan-level) vs project-level assessment	Several respondents noted the retrospective nature of the Plan and assessments and how this affects its influence, also noting project-level decisions that have progressed.	NESO has noted how these matters have been accounted for and/or will continue to be accounted for in the consultation response document.
	Respondents noted a desire for more detailed Plan-level information and clarity regarding the balance between Plan-level and project-level assessments.	NESO has provided further text in the HND Implementation Plan regarding how the Plan is aiming to guide the developments and mitigation, but that developers are required to implement relevant measures through their own environmental assessments.
	Respondents query the non-binding nature of the Plan and mitigation and seek clarity on where responsibilities lie.	

³ <https://www.neso.energy/document/380701/download>



Key theme	Issue raised	Amendment(s) to the Plan
Cross Plan alignment	Respondents noted that the HND Implementation Plan should be aligned with other strategic plans, specifically the Strategic Spatial Energy Plan (SSEP), and the Centralised Strategic Network Plan (CSNP), and that the environmental assessment approach should be consistent across Plans.	NESO has noted how these matters have been accounted for and/or will continue to be accounted for in the consultation response document. NESO has expanded the 'Plan Revision' section of the HND Implementation Plan to show that updates will not only cover developments through the Impact Assessment process, but also updates to legislation and designations, as well as output from future SEP Plans.
Stakeholder engagement	Respondents noted recognition and appreciation of engagement and response to previous engagement, while some noted that engagement was too late to influence the Plan outcomes. Some respondents expressed that engagement was top-down and requested more regional engagement. Respondents requested coordination across Plan consultations.	No amendments were made to the HND Implementation Plan in response to these comments. However, NESO has noted how these matters have been accounted for and/or will continue to be accounted for in the consultation response document. This document also includes a technical annex, which further details the NESO response to more specific questions raised.
Stronger cumulative and in-combination impact assessment	Several respondents expressed that cumulative and in-combination assessments in the environmental assessments was too high-level and asked that these be more explicit and spatially defined.	NESO has noted in the consultation response document that recommendations have been made towards dealing with these potential cumulative issues (see Section 4.5.2 for further detail of expanded cumulative assessment in the SEA Environmental Report), which have also been fed through into the HND Implementation Plan. NESO has added text regarding further project-level consideration of fisheries to the HND Implementation Plan, as follows: The cumulative effects of cables on commercial fisheries should be looked at in more detail at the project stage, including consideration of coordination and solutions. It is understood that better coordination of fishing data is emerging and may be useable across future Plans produced or endorsed by NESO.



Key theme	Issue raised	Amendment(s) to the Plan
Mitigation hierarchy	Several respondents emphasised the importance of Plan-level avoidance of impacts on sensitive sites and avoidance of reliance on project-level mitigation. Respondents requested clarity in mitigation measures expected at project level. Potential socio-economic impact for fisheries was noted, requesting strategic avoidance of key fishing grounds.	NESO has noted how these matters have been accounted for and/or will continue to be accounted for in the consultation response document. NESO has provided further text in the HND Implementation Plan regarding how the Plan is aiming to guide the developments and mitigation but that developers are required to implement relevant measures through their own environmental assessments.
Baselines and monitoring	Respondents noted that baselines should be based on the latest information. Respondents expressed that Plan updates are based on triggers rather than set review cycles.	NESO has made clarifications in the Plan Iteration Section to specify what updates will be made during the next Plan (and environmental assessment updates). This includes HND/HNDFUE project updates as well as changes taking place as a result of the Impact Assessment Process. With regards to monitoring, NESO has expanded the "HND Implementation Plan Iteration Schedule" (Figure 13) to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would result in the Plan being revised more frequently than the current three-year schedule.
Cultural heritage consideration	Historic England requested responded that it should be ensured that consideration and assessment of the historic environment are fully incorporated, with sufficient emphasis on heritage constraints in the Plan.	NESO has added further clarification to the Plan, including: Noting as one of the four network design objectives, Environmental impact – Minimise the impact, where possible, on the natural <i>and historic</i> environment. Noting the statutory consultees for the historic environment for individual projects, as follows: <i>Historic England are statutory consultees for the historic environment in England, along with</i>



Key theme	Issue raised	Amendment(s) to the Plan
		<i>Historic Environment Scotland and Cadw in Wales.</i> For the Plan iteration schedule, noting that: <i>the revision of the Plan (and associated environmental assessments) will also capture any newly designated environmental and heritage sites as part of a revised baseline.</i>

Table 7: Key feedback themes raised regarding the draft HND Implementation Plan during Public Consultation

4.5.2 Amendments to the SEA Environmental Report as a result of Public Consultation

During public consultation, consultees were invited to respond to the SEA Environmental Report in addition to the draft HND Implementation Plan. Responses to the SEA Environment Report of a non-confidential nature were received from the following consultees:

- Marine Management Organisation (MMO)
- Scottish Government
- Natural Resources Wales (NRW)
- Natural England (NE)
- Historic Environment Scotland (HES)
- Scottish Power Renewables (SPR)
- Peterhead Developers Forum
- Historic England (HE)
- Thistle Wind Partners
- Joint Nature Conservation Committee (JNCC)
- Ocean Winds (OW)
- Scottish Fishermen's Federation (SFF)

Key points and issues raised by these consultees regarding the environmental reports during public consultation are summarised in **Table 8**. These comments are provided in full in Appendix A of this SEA Statement.



Responses were also received from several groups that were marked as confidential; these responses and how they were actioned are not included in Appendix A, however all comments were fully considered and actioned as appropriate.

Amendments have been made to the SEA Environmental Report as a result of these comments and recommendations received during public consultation, and these are detailed in Appendix A and summarised in **Table 8**.

SEA-related consultation feedback

Consultee	Main theme(s)	Issue raised	Amendment(s) to the SEA Environmental Report
MMO	Plans and Programmes; baseline; fisheries	Recommendation for minor amendment to the baseline in Section 3.2 of the Environmental Report. Recommendations for minor amendments to the Plans and Programmes in Section 4 of the Environmental Report. Clarification of the data used to represent fishing activity and consistency across NESO projects.	Relevant text was amended in the baseline section. Section 4 was amended for Plans/Programmes.
Scottish Government	Plans and Programmes; alternatives; cumulative assessment; mitigation	Recommendations for minor amendments to the Plans and Programmes in Section 4 of the Environmental Report. Clarification of alternatives considered in the SEA Environmental Report. Clarification of cumulative assessment results in Section 9.2 of the Environmental Report. Clarification and recommendations for minor amendments to mitigation in Section 10.1 of the Environmental Report.	References were updated to the 2025 Scottish SMP OWE. Section 4 of the SEA ER was amended for Plans/Programmes. Section 9.2 was expanded on cumulative text and alternatives were clarified. Section 10.1 mitigation wording was amended.
NRW	Baseline; species/site coverage; fisheries; cumulative effects	Recommendations for minor amendments to the baseline in Section 3.2 of the Environmental Report regarding fish and update of	Relevant text was added to the Environmental Report, including baseline updates, high-level effects content, and cumulative /



Consultee	Main theme(s)	Issue raised	Amendment(s) to the SEA Environmental Report
		the State of Natural Resources Report. Recommendations for minor amendments to the assessment for consideration of potential effects on marine mammals, consideration of Carmarthen Bay and Estuaries SAC, and potential for cumulative or in-combination for protected fish receptors for corridors within the Celtic Sea. Recommendation for clarification or further consideration of the potential for cumulative effects on marine mammals. Recommendations for minor amendments to the mitigation for potential effects on fish in Section 10.1 of the Environmental Report. Recommendation for minor update/amendment to an SEA Light assessment in Appendix F of the Environmental Report.	in-combination effects text.
NE	SEA appendix A consultation log; decommissioning; landscape; cumulative effects	Appendix A of the Environmental Report SEA scoping consultation comments log welcomed. Recommendation for minor amendments to the high-level effect assessment, including greater consideration of decommissioning, separation of protected landscapes from landscape character, and consideration of offshore changes and potential risk to cables. Recommendations for minor amendments to the mitigation for potential effects of climate change on cable exposure in	Decommissioning effects were referenced in Table 28 and Table 40. The landscape / protected landscapes wording was clarified in the Environmental Report. Mitigation text was amended in Section 10.1.



Consultee	Main theme(s)	Issue raised	Amendment(s) to the SEA Environmental Report
		Section 10.1 of the Environmental Report.	
HES	Cultural heritage baseline; data sources; cumulative effects	Recommendations for minor amendments to the baseline for cultural heritage in Section 3.2 of the Environmental Report. Recommendation for an addition to the Plans and Programmes in Section 4 of the Environmental Report. Recommendations for minor amendments and clarifications to the mitigation for potential effects on cultural heritage in Section 10.1 of the Environmental Report, particularly in areas where cumulative issues have been identified.	Cultural heritage text was expanded in the Environmental Report. Baseline wording was updated in Section 3.2. Section 9.2.1 was amended on cumulative effects. Table 25 and Appendix D were also updated for Plans and Programmes.
Scottish Power	Cumulative effects; interface areas; strategic monitoring	Recommendation for further consideration of alternatives in Section 7 of the Environmental Report in terms of combinations of feasible spatial options to connect individual offshore wind farms. Recommendation to include a spatially defined cumulative impact assessment and cumulative conclusions of interface area assessments in the main SEA Environmental Report. Recommendation for the monitoring framework in Section 10.2 of the Environmental Report.	Section 9.2.1 was expanded to carry the interface area and cumulative conclusions into the main text.
Peterhead Developer's Forum	Cumulative effects; interface areas; strategic conclusions	Recommendation to include a spatially defined cumulative impact assessment and cumulative conclusions of interface area assessments in	Section 9.2.1 was expanded to carry the interface area and cumulative conclusions into the main text.



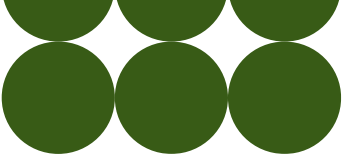
Consultee	Main theme(s)	Issue raised	Amendment(s) to the SEA Environmental Report
		the main SEA Environmental Report. General agreement with strategic-level interface area assessment for the Peterhead area. Recommendation for further consideration of alternatives in Section 7 of the Environmental Report in terms of combinations of feasible spatial options to connect individual offshore wind farms. Recommend that strategic acceptability should be stated more clearly.	
Historic England	Cultural heritage; monitoring; cumulative effects; baseline data	Welcome how cultural heritage has been considered in the scoping of SEA Issues. Recommendations for minor amendments to the baseline for cultural heritage in Section 3.2 of the Environmental Report. Recommendations for minor amendments to the mitigation for potential effects on cultural heritage in Section 10.1 of the Environmental Report. Recommendation for highlighting settings for both offshore and onshore interventions under the main strategic potential effects for both cultural heritage and landscape, seascape and visual amenity. General agreement with potential cumulative effects recognised for cultural heritage in Section 9.2 of the Environmental Report and recommendation for a minor addition regarding the	Table 26 SEOs was updated to include non-designated heritage assets. Section 9.2.1 was amended. Table 40 mitigation was updated with heritage data sources.



Consultee	Main theme(s)	Issue raised	Amendment(s) to the SEA Environmental Report
		potential for a loss of long-term access to heritage assets. Recommendation for inclusion of additional data sources for the monitoring of cultural heritage in Section 10.2 of the Environmental Report.	
Thistle Wind Partners	Cumulative effects; interface areas; strategic conclusions	Recommendation to include a spatially defined cumulative impact assessment and cumulative conclusions of interface area assessments in the main SEA Environmental Report. Recommendation that the consideration of alternatives in Section 7 of the Environmental Report is limited to this considered 'reasonable'.	Section 9.2.1 was expanded to carry the interface area and cumulative conclusions into the main text.
JNCC	Statutory consultee status; SEA scope; construction / operation / decommissioning coverage; future feedback handling	Advise inclusion of JNCC as a statutory consultee for SEA in England, Scottish offshore waters, and Welsh offshore waters in Section 1.6 of the Environmental Report. Recommendations for minor amendments to the baseline in Section 3.2 of the Environmental Report regarding consideration of Annex I features and Annex II species, consideration of habitats sensitive to cabling and key issues of relevance to marine mammals. Recommendations for minor amendments to the mitigation in Section 10.1 of the Environmental Report. Clarification of overall assessment scoring and differentiation between sensitivity of designated sites.	Section 1.6 was updated to list JNCC. Section 3.2.1 was amended for Annex I / Annex II features. Table 2 and key biodiversity issues were updated. Section 10.1 mitigation text was updated. Section 9 was updated to specify long-term impacts, where relevant and Section 9.2.1 was expanded.



Consultee	Main theme(s)	Issue raised	Amendment(s) to the SEA Environmental Report
		Recommendation to include operation, maintenance and decommissioning phases of the Plan for all key issues and assessment. Clarifications and recommendations for minor amendments to the assessment in Section 9, including consideration of long-term impacts and specific considerations for marine mammals and birds. Recommendation for further consideration of cumulative effects in Section 9.2 of the Environmental Report, including consideration of co-location of infrastructure and the potential for cumulative short-term negative effects on harbour porpoise within designated sites.	
Ocean Winds	SEA monitoring	Advise that assumptions within the assessment are inconsistent with certain current project assumptions.	No amendments have been made to the SEA Environmental Report.
Scottish Fishermen's Federation	Assessment and fisheries	Concern that the SEA, HRA and MCZ assessments do not fully recognise risks posed to fishing grounds, spawning and nursery habitats, or long-term sustainability of commercial fisheries. Specific concern regarding consideration of the fish and shellfish spawning and nursery grounds in the assessment. Specific concern regarding assessment of EMF impacts from subsea cables, including cumulative effects.	Section 9.2.1 was expanded, and recommendations for coordination brought through to the mitigation in Section 10.1.



Consultee	Main theme(s)	Issue raised	Amendment(s) to the SEA Environmental Report
		Specific concern regarding a lack of recognition of fishing grounds as sensitive receptors.	
		Recommendation for further avoidance at the strategic level over project-level mitigation.	

Table 8: Key points and issues raised regarding the SEA Environmental Report during Public Consultation

4.5.3 Amendments to the HRA and MCZ reports as a result of Public Consultation

During public consultation, consultees were invited to respond to the HRA and MCZ reports in addition to the draft HND Implementation Plan. Responses to the HRA and MCZ reports of a non-confidential nature were received from the following consultees:

- Scottish Government
- Marine Management Organisation (MMO)
- Joint Nature Conservation Committee (JNCC)
- Natural England (NE)
- Natural Resources Wales NRW
- Scottish Power Renewables (SPR)
- Offshore Wind Developer
- Ocean Winds (OW)
- Kent Wildlife Trust (KWT)

Key points and issues raised by these consultees regarding the HRA and MCZ reports during public consultation are summarised in **Table 9**. These comments are provided in full in Appendix A of this SEA Statement. Responses were also received from several groups that were marked as confidential; these responses and how they were actioned are not included in Appendix A, however all comments were fully considered and actioned as appropriate.

Amendments have been made to the HRA and MCZ reports as a result of these comments and recommendations received during public consultation, and these are detailed in Appendix A and summarised in **Table 9**.



HRA and MCZ-related consultation feedback

Consultee	Main theme(s)	Issue raised	Amendment(s) to the HRA and MCZ reports
Scottish Government	Plans and Programmes; date sources; cumulative assessment; clarification on alignment and other means of proceeding; clarification on government planning policy	Greater clarity requested on references to the SMP OWE and associated assessments. Clarification requested on Plans and Programmes considered in the HRA and MCZ context. Clarification requested on cumulative assessment approach and results in the HRA. Clarification requested on the assessment of “other means of proceeding” and how this aligns with Scottish policy. Clarification requested on government planning policy in relation to compensatory measures.	References were updated to the 2025 Scottish SMP OWE in the HRA and MCZ reports. Supporting summary conclusions text has been added to the in-combination assessment in the MCZ. The HRA has been updated to note that the planning policy referenced for compensatory measures applies only in England and Wales. The stage 2 section of the MCZ has been updated in relation to East of Gannet and Montrose Fields NCMPA to provide clarity on the specific other means of proceeding, and the stage section INTOG has been updated.
MMO	MCZ assessment; MMO responsibilities	Recommendation for further avoidance of the North East of the Farnes Deep Highly Protected Marine in the MCZ. Request further clarity on MMO responsibilities in the MCZ. Recommendation for further consideration of UXO in the MCZ assessment. Request clarification regarding language used for habitat loss in the MCZ assessment. Recommendation for further consideration of existing	Text in the MCZ was updated to clarify the role of the MMO. Text has been updated in the cumulative stage 2 MCZ assessment regarding routes and potential habitat loss.



Consultee	Main theme(s)	Issue raised	Amendment(s) to the HRA and MCZ reports
		cables in the cumulative assessment of the MCZ.	
JNCC	HRA assessment assumptions; mitigation hierarchy; mitigation reliance at Plan level; mitigation for UXO; feature naming/terminology; site details; Plan-level derogation and strategic mitigation; Zone of interest; cable crossings; sound impacts in marine mammals; MCZ Plan-level Measures of Equivalent Environmental Benefit	Request clarification that HRA assessment based on worst-case scenario. Request clarification of mitigation requirements at project level in the HRA and MCZ and certainty of mitigation measures. Recommend that the mitigation hierarchy is followed, with site avoidance the preferred approach, noting that this was not possible for three corridors taken forward to derogation. Request clarity that all designated features were assessed in the HRA and recommend consistent use of terminology. Recommend that relevant conservation objectives and site condition information included in HRA Appendix B. Recommend a Plan-level HRA derogation for routes associated with the Dogger Bank SAC, that mitigation measures are considered to limit the amount of compensation required and that the use of cable protection is reconsidered. Recommend amendment to mitigation for UXO in the HRA. Request clarification regarding the zone of interest extension to 17km in the MCZ and consideration of additional MCZs.	Wording in HRA updated to clarify that all assessment based on a worst-case scenario. No other amendments made to the HRA and MCZ reports. Response to comments detailed in Appendix A.



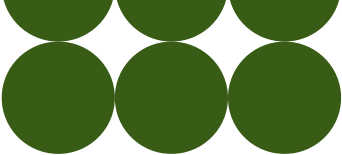
Consultee	Main theme(s)	Issue raised	Amendment(s) to the HRA and MCZ reports
		Note the undefined locations of cable crossings at Plan level. Recommendation for alternative sound exposure criteria for auditory injury in marine mammals. Recommendation for Plan-level consideration of Measures of Equivalent Environmental Benefit (MEEB) if a route avoiding an MPA cannot be identified. Disagreement that routing through the East of Gannet and Montrose NCMPA cannot be avoided.	
NE	Strategic effects, mitigation and compensation; HRA Plan level mitigation; indirect habitat impacts; temporary effects from construction; designated site avoidance and HPMA; hydrodynamics; sediment processes; BRAG rating for sites; cable installation and site conservation objectives	Clarity regarding strategic-level effects and strategic compensation, with specific reference to Dogger Bank SAC. Recommendation regarding Plan-level mitigation for UXO and cable burial in the HRA. Recommendation for further consideration of indirect habitat impacts in the HRA. Recommend further consideration of construction phase temporary impacts in the HRA and MCZ. Request clarity regarding the distance used for tidal ellipses. Recommend further consideration of sediment processes. Recommend greater BRAG sensitivity ranking for Outer Thames Estuary, Greater Wash and Liverpool Bay	Minor amendments have been made to the HRA mitigation regarding UXO. Strategic compensation recommendation for Dogger bank added to the HRA derogation report. Minor amendment to reports to update and align the tidal ellipse distance as 17km. Amendments have been made to the text in the MCZ regarding cable installation within the Flyde MCZ and reference to percentage loss removed.



Consultee	Main theme(s)	Issue raised	Amendment(s) to the HRA and MCZ reports
		SPAs due to red-throated diver.	
		Recommend amendment to cable installation effects on the conservation objectives of Flyde MCZ and use of percentages for calculating potential overall impacts of a designation.	
NRW	HRA screening of designated sites; HRA mitigation; Plan versus project level site risk; physical processes and hydrodynamics; underwater sound impacts; cable exposure, climate change risk and cable protection; temporary effects from construction; impacts due to prey availability; in-combination effects	Noted screening issues for species and designated sites in the HRA. Recommendations for minor amendments to the HRA mitigation. Request clarification regarding hydrodynamic changes and zone of influence in the HRA and MCZ. Request clarification regarding noise impacts on marine receptors in the HRA. Request clarification regarding airborne sound and visual disturbance impacts in the HRA. Request clarification regarding prey availability impacts in the HRA and MCZ. Request clarification regarding collision risk impacts in the MCZ. Recommend further consideration of construction phase temporary impacts in the HRA and MCZ. Recommend further consideration of cable burial	Appendix A of the MCZ and Appendix A and B of the HRA amended to incorporate advise on screening of species and sites and minor amendments made to the HRA and MCZ reports. Text has been expanded in the HRA conclusions in relation to project level requirements. Explanatory footnote added to the HRA and MCZ reports regarding hydrodynamic changes and zone of influence. Minor amendments have been made to text referencing marine noise impacts and airborne sound and visual disturbance in the HRA. Minor amendments have been made to text referencing prey availability impacts in the HRA and MCZ. Minor amendments have been made to text referencing collision risk impacts in the MCZ. Text has been added to the HRA to regarding



Consultee	Main theme(s)	Issue raised	Amendment(s) to the HRA and MCZ reports
		and climate change risk to cables in the HRA. Request clarity for in-combination effects and screening in the MCZ.	cable burial, climate change and a cable burial assessment. Text has been added to the HRA and MCZ to reference additional construction phase temporary impacts. Relevant text has been clarified in the MCZ with regard to in-combination effects and screening.
Scottish Power	Impact Assessment and change control; Scottish Marine Protected Areas; mitigation	Request for clarification on conclusion text in the HRA. Requests that the MCZ refers to the Impact Assessment process and that the HRA and MCZ signpost this process. Request clear consideration and reporting on Scottish Marine Protected Areas. Clarification on Plan-level mitigation. Welcome appropriate buffers for Marine Protected Areas.	The MCZ assessment wording has been updated to reference the Impact Assessment process, and further clarification has been added to the HRA. The MCZ assessment wording has been updated to clarify consideration of Scottish Marine Protected Areas.
Offshore Wind Developer	Positive feedback	Support the impact pathways, reasonable alternatives, cumulative and in-combination effects, and applicable mitigation and monitoring principles in the environmental assessments (SEA, HRA and MCZ).	No changes made to the HRA and MCZ reports.
Ocean Winds	HRA conclusions	Disagree with HRA conclusions regarding potential interaction with Pobie Bank SAC	No amendments made to the HRA reports. Response to comments detailed in Appendix A.
Kent Wildlife Trust	HRA conclusions; alternatives	Disagree with HRA conclusions for the Thanet	No amendments made to the HRA reports.



Consultee	Main theme(s)	Issue raised	Amendment(s) to the HRA and MCZ reports
		Coast and Sandwich Bay SPA/Ramsar	Response to comments detailed in Appendix A.
		Request consideration of alternatives to routes into Kent in the HRA.	

Table 9: Key points and issues raised regarding the HRA and MCZ reports during Public Consultation

5. Reasons for choosing the Plan in light of other reasonable alternatives

5.1 Introduction

5.2 Consideration of alternatives during HND development

5.3 Strategic-level alternative scenarios assessed in the SEA Environmental Report





5.1 Introduction

The SEA process must include an evaluation of the likely environmental consequences of a range of reasonable alternative scenarios, which in this case are alternatives to the HND Implementation Plan. The purpose of this section is to outline the reasons for choosing the HND Implementation Plan, as adopted, as the preferred alternative in light of other reasonable alternatives considered.

5.2 Consideration of alternatives during HND development

A significant number of potential route corridors, and options comprising combinations of route corridors, were appraised through the network design and assessment methodology applied for the four HND/HNDFUE work strands, with a Recommended Design identified for each. This equal footing appraisal methodology considered environmental, community and technical constraints and sensitivities at key points in the process. These constraints and sensitive features represented the topics considered in SEA and the potential impacts of cabling operations on key areas and/or features that should be avoided; therefore, during this stage of route corridor and options appraisal, all technically feasible alternative route corridors and options available to the Plan were assessed, and the short-listing of potential route corridors and options was influenced by environmental and social factors.

For a total of 112 short-listed route corridors, an SEA light assessment was conducted. This was based on key indicators across SEA topics and included identification of the potential for effects on these indicators and the nature of these effects (e.g., significance and temporal nature). An SEA light assessment was also undertaken for a total of 31 short-listed options, comprised of route corridor combinations that represented potentially viable alternatives. In addition, an SEA light assessment was conducted for a total of 39 interface areas, which considered the wider area around the endpoint of route corridors where onshore infrastructure, including substations and/or converter stations would need to be developed. The SEA light assessment of all short-listed route corridors, options and interface areas was provided in Appendix F of the SEA Environmental Report.

In summary, all technically feasible alternative route corridors and options available to the Plan were assessed using the equal footing appraisal process, with short-listed route corridors, options and interface areas also further considered through SEA light appraisal. The identification of Recommended Designs for the HND Implementation Plan was informed by these outcomes.



5.3 Strategic-level alternative scenarios assessed in the SEA Environmental Report

The following strategic-level alternatives were considered in the SEA process for the HND Implementation Plan:

- Strategic Alternative 1, Do Nothing approach – considers the existing approach to connection of offshore wind generation sites, whereby those awarded leasing rights for offshore wind apply for connection to the onshore electricity network independently and on a first come, first served, basis.
- Strategic Alternative 2, HND/HNDFUE network design approach – considers all Recommended Designs established by the four HND/HNDFUE work strands, representing a more coordinated approach to the connection of offshore wind sites to the onshore electricity network.

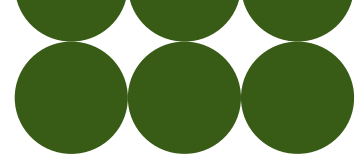
Section 7.3 of the SEA Environmental Report provided a comparative evaluation of the likely environmental effects of implementing these strategic level alternatives and determined the likely positive or negative effects in comparison to the SEOs.

5.3.1 Strategic Alternative 1

In the absence of the HND Implementation Plan, offshore wind would continue to play a key role in meeting both the anticipated substantial rise in electricity needs and the UK Government's target for net zero emissions. Therefore, offshore wind would continue to be developed in GB waters and would need to be connected to the onshore electricity network. In this scenario, the developers of offshore wind projects would continue to have control of developing the offshore transmission assets required to bring generated energy onshore, with individual connections from each offshore project to the onshore network, i.e. a point-to-point or radial connection.

For Strategic Alternative 1, there is the potential for short to medium-term, negative effects on the SEOs for Biodiversity, Flora and Fauna; Geology, Soils and Land Use; Population and Human Health; Water; Cultural Heritage; and Material Assets, and potential for long-term negative effects on the SEOs for Material Assets; Air; Climatic Factors; Cultural Heritage; and Landscape and Visual Amenity.

There is potential for short to medium-term, negative effects on the SEOs for Biodiversity, Flora and Fauna, and Geology, Soils and Land Use, as there would be no strategic-level consideration of designated sites such as SACs, SPAs, MCZs, NCMPAs and SSSIs. With a continued radial approach to the connection of offshore wind, there is greater potential for attempting to develop additional cable routes through designated sites. There would, however, be a requirement for developers and planning authorities to consider these sites at the project level through Screening for AA/AA and MCZ Assessments. In the absence of



a coordinated approach, there is potential for greater disturbance to populations in proximity to cable routes and areas where onshore developments are required, with potential for short-term negative effects on the SEOs for Population and Human Health. There is also potential for greater cumulative negative effects on water quality through subsequent routing of cables through and across the same waterbodies.

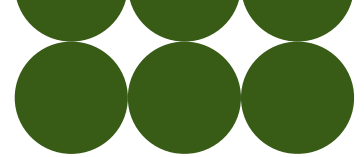
With the continued attempts for radial connections, there is potential for an increased risk to known and unknown heritage features and the SEOs for Cultural Heritage owing to the likelihood that a wider area could be affected where study corridors are not shared. In the long-term there is potential for an increased risk of negative effects on sensitive landscape areas and the SEOs for Landscape and Visual Amenity, as well as the setting of heritage assets and the SEOs for Cultural Heritage, where the cumulative impacts of interface area developments such as substations and converter stations are not considered at a strategic level. However, these potential impacts will continue to be considered at the project level.

In this scenario, there is potential for long-term positive effects on the SEOs for Material Assets, Air, Climatic Factors and Population and Human Health, owing to the development of new renewable energy infrastructure, increased connection of offshore wind to the electricity network to meet population demand and offer alternative to fossil fuel electricity generation with indirect positive effects on air and climatic emissions. However, there is potential for short-term negative effects on the SEOs for Material Assets, as a continued radial approach to the connection of electricity generated offshore is likely to lead to an increased interaction with existing and planned infrastructure both offshore and onshore, including an increased number of crossings of existing cables, pipelines and roads. There is also potential for long-term negative effects on the SEOs for Material Assets and Population and Human Health in this scenario, as a continued radial connection may lead to saturation of some areas for connection to the onshore grid and the lack of strategic planning for energy connection may leave some areas unable to meet increased electricity demand. Should saturation of areas for onshore connection and inability for additional developments to connect to the onshore grid occur, this would also result in long-term (limited) positive impacts on the SEOs for Air and Climatic Factors, as less connection of renewable energy sources to the electricity supply network is likely to result in the continued reliance upon finite fossil fuels and thus the ongoing, long-term emissions of pollutants into the atmosphere. With population growth and therefore increased electricity demands expected into the future, the severity of these impacts is likely to increase with time.

5.3.2 Strategic Alternative 2

The assessment of implementing the Recommended Designs of the HND Implementation Plan, i.e., Strategic Alternative 2, is reported in detail in Section **Error! Reference source not found.** of the SEA Environmental Report. The development of the work strands of the HND Implementation Plan considered and assessed both the potential radial approaches and coordinated approaches to cabling connections from offshore wind farms.

In this scenario, the potential would remain for short to medium-term negative effects across the SEOs for all topics. However, the consideration of environmental sensitivities



throughout the development of the draft Plan and selection of Recommended Designs enables the minimisation of potential negative effects. This includes avoidance of designated sites, and areas protected for heritage and landscape importance.

With greater coordination in the connection of offshore wind to the onshore electricity network, there is a greater possibility of maximising the potential for positive long-term effects. In comparison to Strategic Alternative 1, there is a reduced likelihood that routes to shore will become saturated for development and greater potential for direct long-term positive effects on the SEOs for Material Assets, and indirect long-term positive effects on the SEOs for Air, Climatic Factors and Population and Human Health.

6. Measures to monitor significant environmental effects of implementing the Plan

6.1 Monitoring





6.1 Monitoring

The SEA Directive requires that significant environmental effects arising from implementation of a Plan or Programme are monitored in order to identify, at an early stage, any unforeseen adverse effects and in order to undertake appropriate remedial action. A recommended environmental monitoring programme is provided in Section 10.2 of the SEA Environmental Report, as shown in **Table 10** below. This is based on the Targets and Indicators established in the SEOs. SEA monitoring should be undertaken in conjunction with proposed reviews of the HND Implementation Plan, in advance of updates, to enable monitoring outcomes to influence the HND Implementation Plan development. Much of the environmental monitoring proposed can be collated from ongoing environmental monitoring and reviews undertaken by bodies such as statutory nature conservation bodies and the Office for National Statistics. The indicators and data proposed for the monitoring of the HND Implementation Plan implementation are at a strategic level, to match the SEO objectives. The suggested data sources for monitoring of effects are mostly at a strategic level, are nationally consistent and are freely available.

Monitoring is also likely to be required as part of consenting conditions at the project level for cabling and associated infrastructure developments. Project level monitoring outcomes may influence future understanding of environmental interactions and can be considered during subsequent HND Implementation Plan updates or Centralised Strategic Network Plan (CSNP) updates, if appropriate and relevant to the strategic-level indicators, to account for gaps in national level reporting cycles. It should also be noted that under the SEA process and with required survey campaigns that there should be opportunities to share new knowledge from collaborative approaches to expand knowledge and understanding to inform future developments and aid decision-making processes.

SEA Monitoring

SEO	Indicator	Target	Proposed Data Source(s)
Biodiversity, Flora and Fauna Avoid damage to, and where possible enhance, biodiversity, flora and fauna. Objective Description Preserve, protect, maintain and, where possible, enhance	- Conservation status of designated habitats and species within international and national designated sites (e.g., SACs, SPAs, Ramsar sites, MCZs, NCMPAs, SSSIs). - Status of protected and priority habitats and species (e.g.,	- No negative change, or a positive change, in the conservation status of designated habitats and species within international, and national designated sites. - No negative change, or a positive change, in	- Site condition monitoring and reporting for SACs, SPAs, Ramsar sites, MCZs, NCMPAs, and SSSIs by Statutory Nature Conservation Bodies (SNCBs: Natural England and DEFRA, NatureScot, NRW). - SNCB, JNCC reporting of

SEO	Indicator	Target	Proposed Data Source(s)
biodiversity and ecosystems within GB marine and coastal areas, including internationally, nationally, and locally protected sites, habitats and species, and other known species of conservation concern.	Annex habitats and species, priority habitats and species). • Areas of known importance for flora and fauna (e.g., fish spawning and nursery grounds, RSPB Reserves, NRW habitats sensitive to cabling).	the status of protected or priority species and habitats outside designated sites. • Avoid areas of known importance for flora and fauna.	protected and priority species. • SNCB reporting of non-native and invasive species. • CEFAS or other published reviews of fish spawning and nursery grounds. • OSPAR review/further mapping of threatened or declining habitats and species. • Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles. • NESO Plan-level monitoring.
Population and Human Health Minimise disruption to the local population, and adverse effects on human health and wellbeing, while maximizing potential benefit to the population. Objective Description Avoid adverse effects on human health and	• Population centres in proximity to onshore routes. • Areas of higher deprivation in proximity to onshore routes. • Use of the area by recreational and leisure users (e.g., RYA areas, Bathing waters) and status of these areas, where applicable.	• Delivery of cables and associated infrastructure with minimal adverse nuisance to communities, including in areas of higher deprivation. • Minimise the risk to, or displacement of, recreational and leisure users of the area. • No negative change, or a	• Office for National Statistics (England and Wales), National Records of Scotland census data. • Consumer Data Research Centre harmonised statistics on population deprivation. • ONS employment data.

SEO	Indicator	Target	Proposed Data Source(s)
safety and minimise disruption to the local population, and displacement of recreational and leisure use of the area, while supporting transition from fossil fuel use through delivery of a new secure renewable energy supply for the GB population, with potential employment and other benefit opportunities.	Potential to support new renewable energy supply for the GB population, with potential employment and other benefit opportunities.	- positive change, in the status of Bathing Waters. - Facilitation of renewable energy infrastructure that supports a transition away from fossil fuel use and maximises the potential benefits to the population.	- RYA leisure density data (review of any changes). - Environment Agency (England), SEPA (Scotland), NRW (Wales) reporting of Bathing Water quality. - Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles. - NESO Plan-level monitoring, including data on capacity of new renewable energy generation facilitated.
Geology, Soils and Land Use Minimise damage to the function and quality of the seabed, and avoid significant damage to, or loss of, sensitive onshore land and soils. Objective Description Preserve, protect, maintain and, where possible, enhance, sites designated for geological or	- Site condition/status of protected geological/geomorphological features within designated sites (WHSS, MCZs/Historic MPAs, SSSIs, UNESCO Geoparks). - Interaction with known areas of potential contamination (e.g., MoD live firing areas, munition disposal areas, UXO,	- No negative change, or a positive change, in the condition of protected geological/geomorphological features within designated sites. - Minimise potential interaction with areas of potentially contaminated sediments. - Minimise potential loss or alteration to	- Site condition monitoring and reporting for MCZs, MPAs and SSSIs by SNCBs (Natural England and DEFRA, NatureScot, NRW). - DEFRA reporting for the Marine Strategy (e.g., Descriptor 6: sea floor integrity). - UK Centre for Ecology and Hydrology (UKCEH) CORINE data and review/update of UK Agricultural Land

SEO	Indicator	Target	Proposed Data Source(s)
geomorphological features, and minimize direct and indirect damage to the function and quality of the seabed and sensitive onshore land and soils.	dumping grounds offshore). • Potential scale of loss or alteration to seabed geology and sediments. • Potential scale of loss of soil resource including high-quality agricultural lands.	seabed geology and sediments. • Minimise potential loss of sensitive land and soils including high-quality agricultural lands.	Classification and Land Quality Survey (Natural England), Land Capability for Agriculture (James Hutton Institute). • Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles. • NESO Plan-level monitoring.
Water Avoid impacts on the status or quality of waterbodies and avoid interaction with areas of flood risk. Objective Description Support the objectives of the WFD and MS by avoiding damage to or deterioration of water status, quality and resource and support the objectives of the Floods Directive by avoiding interactions with national flood zones.	• Status of WFD waterbodies and protected areas (Bathing Waters, Shellfish Waters) interacting with offshore and onshore routes. • MS Environmental status of marine area (e.g., Descriptor 5, 8, 9, 10, 11). • Interaction with known areas of potential contamination offshore (e.g., MoD live firing areas, munition disposal areas, UXO, dumping grounds). • Potential for impacts on water	• No negative change in the status of WFD waterbodies, and protected areas. • No negative change in the Environmental status of MS Descriptors. • Minimise potential interaction with areas of potentially contaminated sediments. • Minimise the potential for impacts on water quality during construction. • Minimise potential interaction with areas of known flood risk.	• Reporting of waterbody status in RBMPs by Environment Agency (England), SEPA (Scotland), NRW (Wales). • DEFRA reporting for the MS (e.g., Descriptor 5: human induced eutrophication, Descriptor 8: concentration of contaminants within marine environment, Descriptor 9: concentrations of contaminants in fish and other seafood, Descriptor 10: marine litter, Descriptor 11: human introduced noise).

SEO	Indicator	Target	Proposed Data Source(s)
	quality during construction. Interaction with areas of known flood risk (national flood zones).		- Flood risk management reporting by Environment Agency (England), SEPA (Scotland), NRW (Wales). - Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles. - NESO Plan-level monitoring.
Air Minimise risk to local air quality and contribute to improving national emissions. Objective Description Minimise risk to local air quality and contribute to improving regional pollutant emissions.	- Sensitive receptors in proximity to routes (e.g., population centres onshore, areas of high recreational/leisure use offshore). - Interaction with areas of known air quality issues onshore (e.g., Air Quality Management Areas) - Capacity to support new renewable energy connection, with potential effects on pollutant reduction.	- Minimise the potential for negative effects on air quality from vessel emissions and onshore emissions. - Avoid interaction with areas of known air quality issues onshore. - Facilitation of renewable energy infrastructure that supports a transition away from fossil fuel use and maximises the potential for a reduction in air pollutant emissions.	- Office for National Statistics (England and Wales), National Records of Scotland census data. - RYA leisure density data (review of any changes). - DEFRA and National Atmospheric Emissions Inventory air quality and emissions reporting. - Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles.

SEO	Indicator	Target	Proposed Data Source(s)
			NESO Plan-level monitoring, including data on capacity of new renewable energy generation facilitated.
Climatic Factors Avoid impacts on carbon stocks and potential while contributing to a reduction in GHG emissions. Objective Description Minimise loss of carbon sequestering seabed and terrestrial carbon sinks while contributing to a reduction in GHG emissions from the energy supply sector in line with national commitments.	- Interaction with areas of known or potential blue carbon habitats. - Interaction with onshore habitats that are carbon sinks (peatlands, forests). - Capacity to support new renewable energy connection, with potential effects on GHG reduction.	- Minimise the potential for loss of known blue carbon habitat. - Minimise the potential for loss of onshore habitats that function as carbon sinks. - Facilitation of new renewable energy infrastructure that maximises the potential for a reduction of GHG emissions in line with emission reduction targets.	- SNCB reporting / published information of Annex I habitats / areas of known or potential blue carbon habitat. - National Atmospheric Emissions Inventory GHG emissions reporting. - Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles. - NESO Plan-level monitoring, including data on capacity of new renewable energy generation facilitated.
Material Assets Minimise disruption to other assets and infrastructure while providing robust new	Presence of offshore and onshore coastal infrastructure (e.g., cables, pipelines, roads, WWTWs).	Minimise the potential for loss or damage to other marine, coastal, and onshore infrastructure.	NESO Plan-level monitoring, including data on capacity of new renewable energy generation facilitated.

SEO	Indicator	Target	Proposed Data Source(s)
renewable energy infrastructure. Objective Description Provide robust new renewable energy infrastructure while minimising disruption to other assets and infrastructure.	- Interaction with other users of the marine area (shipping, fisheries and Shellfish Waters, military, aviation, dredging sites). - Potential capacity of new renewable energy infrastructure facilitated.	- Minimise the risk to, or displacement of, other users of the area (fisheries and aquaculture, shipping, military activities, aviation, dredging sites). - Facilitation of new renewable energy infrastructure that maximises the potential energy output in line with government targets to decarbonise the power system by 2030.	- Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles. - Shipping statistics and data (e.g., ports traffic, Vessel Monitoring System (VMS) density data – review of any changes). - Fisheries statistics and data (e.g., UK Sea fisheries annual statistics reporting, MMO fish landings reporting, and data (e.g., ports traffic, VMS density data – review of any changes)).
Cultural Heritage Protect, conserve, and enhance designated and non- designated heritage assets and their settings. Objective Description Protect international, national and local heritage designations, and non-designated heritage assets, and their settings.	- Interaction with known designated marine heritage features/sites (e.g., protected wrecks, Historic MPAs). - Interaction with known designated coastal archaeological or architectural heritage features (e.g., listed buildings, scheduled monuments). - Potential to contribute to	- Minimise the potential for effects on known designated marine heritage features/sites. - Minimise the potential for effects on known heritage features and their setting in development and operation of onshore infrastructure. - Potential for gaining new knowledge to	- Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles, and condition of heritage assets directly impacted by proposals. - Marine Historic Environment Record (HER) and MDE

SEO	Indicator	Target	Proposed Data Source(s)
	archaeological knowledge through surveys and actions.	inform subsequent decision-making.	Heritage Accelerator (MDEHA) project (http://historicengland.org.uk/advice/planning/infrastructure/renewable-energy/accelerating-clean-energy-offshore/), which is significantly increasing the amount of heritage information available to inform marine development. • Number of new assets discovered by proposed works. • NESO Plan-level monitoring.
Landscape and Visual Amenity Protect, and where possible enhance, the landscape and seascape character and visual amenity of the GB shoreline. Objective Description Protect and where possible enhance the landscape and seascape character	• Potential for effects on visually sensitive designated areas (e.g., National Landscapes, WHSs). • Population centres in proximity to onshore routes.	• No long-term negative change, or a positive change, to areas designated for landscape. • Delivery of cabling and associated onshore infrastructure with minimal adverse visual effects to communities.	• Office for National Statistics (ONS; England and Wales), National Records of Scotland census data. • Reviews, updates or sensitivity assessments of National Character Areas (NCAs) in England (Natural England), National Landscape Character Areas (NLCAs) in Wales



SEO	Indicator	Target	Proposed Data Source(s)
and visual amenity of the GB shoreline.			(NRW), and Landscape Character Areas (LCAs) in Scotland (NatureScot). • Local Development Plan updates. • Information from project-level studies, where appropriate and relevant to strategic-level indicators, to account for gaps in national level reporting cycles. • NESO Plan-level monitoring.

Table 10: SEA Monitoring of the HND Implementation Plan

7. References





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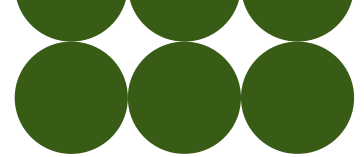
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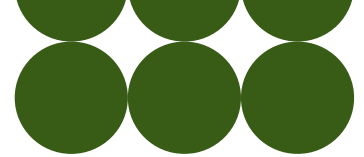
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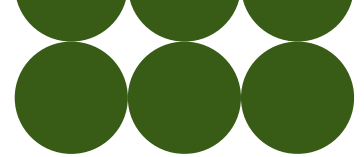
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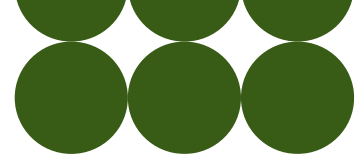
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Appendix A: Summary of comments received from consultees and actions taken



Respondent	Comment	Response or Action
NRW	Please allow sufficient time for consultations (e.g., UK Gov. suggest 21 days for consultations – Consultation and pre-decision matters – GOV.UK). All documents must be provided at the start of the consultation period. If new documents are added, more time must be given for the response to allow consideration of the new information.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
NRW	We note that the HRA refers to the Defra 2021 guidance on compensatory measures – this will be superseded by the environmental compensatory measures reforms which will apply to offshore wind and associated infrastructure. However, as the HRA and MCZ assessments concluded that no compensation was necessary, this comment is more relevant to later plans/processes such as the SSEP/CSNP/RESP.	Noted We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
NRW	We would recommend water quality specific chapters in the documentation.	Changes in water quality are a specific chapter in the HRA report The SEA ER includes a section on Water as part of the baseline description in Section 3.2.4, which includes both water quality and flood risk, as the topic of Water is a requirement for consideration under SEA legislation. The potential for effects on water quality is also considered throughout the assessments in the SEA ER.
NRW	The specific locations where the cable will land have not been shown in detail, just an approximate area. When this has been decided we recommend that sediment samples are taken in the vicinity of where any sediment will be disturbed laying or burying the cable.	This has now been added as a recommendation in the mitigation section of the HRA for sediment disturbance. Noted. This has been included in the mitigation for Water in Table 40 of the SEA ER.



Respondent	Comment	Response or Action
NRW	As standard, we would expect a CEMP for construction work, vehicles and vessels, spillage prevention etc.	Added to relevant mitigation sections in HRA/MCZ reports as a vehicle for mitigation delivery Noted for future working. The requirement for a CEMP has been included as part of the mitigation in Section 10.1 of the SEA ER.
NRW	We note that changes in water quality have not been scoped in nor responded to since our advice on the HRA and MCZ Assessment, 15/01/2025.	Changes in water quality are a specific chapter in the report
NRW	Table 7, p.81: PDA1 could have an effect of sedimentation on Anglesey terns SPA – this has not been considered. R4_4 Bodelwyddan could also have an effect on Liverpool SPA fish eating bird features such as red-throated diver and features of the assemblage such as cormorant and red-breasted merganser due to increase in turbidity. These must be considered.	PDA1 to Llandyfaelog is well over 1 tidal ellipse from Anglesey Terns SPA, being over 140km away. Changes in prey availability (including as a result of sediment) of R4_4 on Liverpool Bay SPA is addressed in Table 17d
NRW	P. 255: We welcome the inclusion of the common scoter and red-throated diver sites where disturbance could potentially have an effect on the sites, but note that Carmarthen Bay SPA has been missed, and could potentially be affected by PDA1 to Llandyfaelog. We note that it is screened into Table 19 as there is potential for disturbance, but suggest it be included as mentioned above.	Noted. Whilst the list on page 255 was not intended to be exhaustive, Carmarthen Bay SPA has been added on page 255
NRW	We agree with the conclusions of the HND Implementation Plan.	
NRW	We continue to note that a consistent methodology has not been applied to screening migratory fish features in/out. Our detailed comments below are relatively minor but should be	Appendix A has been amended. It should be noted that these SACs are all over 100km from the study corridor (and thus beyond the distance used in the AA for identifying significant barrier effects) and the majority are on (or



Respondent	Comment	Response or Action
	noted if this assessment will be used in future project level assessments.	drain to) the south coast of Wales. Moreover, the likely migration routes in Figure 7 show that fish travelling to these SACs are likely to come from the south-west (i.e. the Celtic Sea into the Bristol Channel) rather than from the north through the Irish Sea, which would mean there is limited opportunity for interaction between fish from these SACs and R4_4 to Bodelwyddan.
NRW	SEA Table 10 page 73-80 protected and priority fish and shellfish species. Please note that Common Sturgeon - <i>Acipenser sturio</i> , Sandeel - <i>Ammodytes tobianus</i> and Brook Lamprey <i>Lampetra planeri</i> also all recorded in Welsh waters. In addition we advise many of the listed species also require consideration (e.g. species listed under Section 7 of the Environment (Wales) Act 2016.)	This has been amended in the SEA ER.
NRW	Table 10 page 73-80 protected and priority fish and shellfish species. We advise that the peak migration for juvenile eels (glass eels and elvers) is February to April in the coastal habitats and estuaries, and main migration period for mature (silver) eels is considered to be the autumn months.	This has been amended in the SEA ER.
NRW	Table 10 page 73-80 protected and priority fish and shellfish species. While we agree with the use of the fisheries sensitivity maps by Coull et al. 1998, and Ellis et al., 2012, the limitations of these maps should be noted, especially around the lack of survey data for inshore coastal waters of less than 30m depth, and estuaries, as well as the age of some of the data. NRW advise that additional data sources for the Celtic sea should be consulted, such as the PELTIC surveys conducted	Noted. These datasets were considered to provide the best comparative coverage across the full study area, however, further studies and data should be considered, as relevant for the area, at the project level. The suggested data sources have been referenced in the mitigation section of the SEA ER for consideration at the project level, where relevant for the area.



Respondent	Comment	Response or Action
	by Cefas. The recent report 'Spawning and nursery grounds of forage fish in Welsh and surroundings waters' (Campanella & van der Kooij 2021) presents a useful updated summary of data sources for important areas for several fish species in Welsh waters.	
NRW	Section 9.1.3 HNDFUE Celtic Sea – Recommended Design Potential for Cumulative / In-Combination Effects on Biodiversity, Flora and Fauna p. 487 and p. 553 for Celtic Sea. We advise that here is also potential for cumulative or in-combination for protected fish receptors for corridors within the Celtic sea.	This has been added to the SEA ER.
NRW	SEA Mitigation Measures Table 40, page 568 – Collision risks for marine mammals, fish and birds with vessels and machinery during pre-construction, installation, and decommissioning. We note that fish are included in this table and advise that the proposed mitigation of use of a sound deterrent (at a volume less acoustically damaging than actual activity) or suitable harassment device e.g., a pinger, to induce an avoidance response, would need to be specifically adapted to emit sounds at frequencies detectable by fish and that larger fish species, most at risk from collision, such as elasmobranch are not considered to be sensitive to underwater sound.	Noted. Reference to fish has been removed from this comment in the SEA ER.
NRW	Tables in Chapter 5 Information to Inform Appropriate Assessment In line with previous consultation comments although we agree with the overall conclusions on the	Appendix A has been amended. It should be noted that these SACs are all over 100km from the study corridor (and thus beyond the distance used in the AA for identifying significant barrier effects) and are on (or drain to) the



Respondent	Comment	Response or Action
	assessment, the approach to screening of sites with migratory fish features does not appear to have been done consistently and consequently a number of Welsh sites have been omitted for the corridors, this is particularly apparent in Table 15 Assessment of potential impact to marine mammals and fish from underwater sound and Table 16 Assessment of the potential barriers to migration.	south coast of Wales. Moreover, the likely migration routes in Figure 7 show that fish travelling to these SACs are likely to come from the south-west (i.e. the Celtic Sea into the Bristol Channel) rather than from the north through the Irish Sea, which would mean there is limited opportunity for interaction between fish from these SACs and Ballantrae to Pentir.
NRW	HRA Appendix A In line with previous comments the approach to screen in sites for migratory fish features does not appear to have been applied consistently.	Appendix A has been amended. It should be noted that these SACs are all over 100km from the study corridor (and thus beyond the distance used in the AA for identifying significant barrier effects) and are on (or drain to) the south coast of Wales. Moreover, the likely migration routes in Figure 7 show that fish travelling to these SACs are likely to come from the south-west (i.e. the Celtic Sea into the Bristol Channel) rather than from the north through the Irish Sea, which would mean there is limited opportunity for interaction between fish from these SACs and Ballantrae to Pentir.
NRW	SEA Mitigation Measures Table 40, page 568 – Collision risks for marine mammals, fish and birds with vessels and machinery during pre-construction, installation, and decommissioning. We note that fish are included in this table and advise that the proposed mitigation of use of a sound deterrent (at a volume less acoustically damaging than actual activity) or suitable harassment device e.g., a pinger, to induce an avoidance response, would need to be specifically adapted to emit sounds at frequencies detectable by fish and that larger fish species, most at risk from collision, such as elasmobranch are not considered to be sensitive to underwater sound.	Noted. Reference to fish has been removed from this comment in the SEA ER.



Respondent	Comment	Response or Action
NRW	Table 1 Ballantrae_to_Pentir corridor – sites included/excluded for migratory fish features. We advise that as the following sites should be included; Pembrokeshire marine SAC for shad and sea lamprey and Afon Cleddau SAC for sea lamprey. River Tywi SAC and Carmarthen Bay and Estuaries SAC shad species and sea lamprey. River Usk SAC and Severn Estuary SAC for migratory fish features.	Appendix A has been amended. It should be noted that these SACs are all over 100km from the study corridor (and thus beyond the distance used in the AA for identifying significant barrier effects) and are on (or drain to) the south coast of Wales. Moreover, the likely migration routes in Figure 7 show that fish travelling to these SACs are likely to come from the south-west (i.e. the Celtic Sea into the Bristol Channel) rather than from the north through the Irish Sea, which would mean there is limited opportunity for interaction between fish from these SACs and Ballantrae to Pentir.
NRW	Table 23: Screening of European Sites for Corridor R4_4_to_Bodelwyddan (England/Wales). sites included/excluded for migratory fish features. We advise that as the following sites should be included; Afon Eden – Cors Goch Trawsfynydd SAC for Atlantic salmon and Freshwater peal mussel, Afon Teifi SAC for sea lamprey and Atlantic salmon, Pembrokeshire marine SAC for shad and sea lamprey and Afon Cleddau SAC for sea lamprey. River Tywi SAC and Carmarthen Bay and estuaries SAC shad species and sea lamprey. River Usk SAC and Severn Estuary SAC for migratory fish features	Appendix A has been amended. It should be noted that these SACs are all over 100km from the study corridor (and thus beyond the distance used in the AA for identifying significant barrier effects) and the majority are on (or drain to) the south coast of Wales. Moreover, the likely migration routes in Figure 7 show that fish travelling to these SACs are likely to come from the south-west (i.e. the Celtic Sea into the Bristol Channel) rather than from the north through the Irish Sea, which would mean there is limited opportunity for interaction between fish from these SACs and R4_4 to Bodelwyddan.
NRW	Table 105: Screening of European Sites for Route PDA1_to_Llandyfaelog (Wales), Table 107: Screening of European Sites for Route PDA2_to_South_Wales_Connection_Node (Wales) and Table 109: Screening of European Sites for Route PDA3_to_Pyworthy (England). For these tables we advise that migratory fish from sites in North Wales should be included: Afon Eden – Cors Goch	Appendix A has been amended. It should be noted that these SACs are all over 100km from the study corridor (and thus beyond the distance used in the AA for identifying significant barrier effects) and the majority are on (or drain to) the north coast of Wales. The likely migration routes in Figure 7 show that fish travelling to these SACs are likely to come from the north through the Irish Sea, rather than from the south-west (i.e. the Celtic Sea into the Bristol Channel), which would mean there is limited opportunity for



Respondent	Comment	Response or Action
	Trawsfynydd SAC, Afon Gwyrfaï a Llyn Cwellyn SAC, River Dee and Bala lake SAC and Dee Estuary SAC.	interaction between fish from these SACs and the identified study corridors.
NRW	We do not feel that SEA Scoping comment has been properly considered: "there is reference to "sediment characteristics and transport" from BGS data (p.46, Marine and Coastal Geology and Sediments). We're not aware of sediment transport maps from the BGS. We agree that sediment transport pathway data is needed, therefore can the source be clarified?" While the source was clarified, the maps referred to are of seabed geology and not sediment transport pathways. Therefore, it should be stated that information on sediment transport pathways will require further detail at project level to determine impacts.	Noted. This has been specifically stated in Table 40 of the SEA ER under the topics of BFF and GSL.
NRW	P.39 states "As a general rule, impacts from hydrodynamic changes (i.e. erosion), sediment disturbance and sediment transport at any designated site that lies more than the distance of one tidal ellipse away from a scheme boundary are unlikely to arise in practice In the nearshore this should extend to the boundaries of littoral/sub-cell boundaries p11 of the following guidance- https://cdn.cyfoethnaturiol.cymru/0ctp0id1/gn41-marine-physicalprocesses-guidance-to-inform-eia.pdf	Noted. We acknowledge the reference to NRW GN41 in relation to defining the Zone of Influence in the nearshore in Welsh waters. As this is a UK wide Plan-level assessment, the general screening approach is necessarily strategic in nature. However, a footnote has been added to clarify that the interpretation of Zone of Influence in nearshore environments may vary depending on regional guidance. Project-level assessments should have regard to the relevant national guidance applicable to the location of the scheme. Footnote added to page 39 of HRA and page 38 of MCZ stage 1.
NRW	P.55 Refers to the Temporary physical disturbance of subtidal and/or intertidal habitats this list should be expanded to include a vehicle management plan which identifies sensitive habitats and adheres to best practice to	Noted. Reference has been added to the mitigation list of the HRA for this impact pathway



Respondent	Comment	Response or Action
	avoid damage to these. For example, identifying vehicle routes, briefing staff on site sensitivities, and identifying pollution control measures. 24.P.66 Refers to the mitigation which have the potential to avoid	
NRW	P.66 Refers to the mitigation which have the potential to avoid and/or reduce the permanent loss of seabed or intertidal habitats this list should be expanded to include an assessment of the impacts of climate change on the exposure of the cable through a Cable Burial Risk Assessment.	Noted. Reference has been added to the mitigation list of the HRA for this impact pathway
NRW	P.305 of the SEA highlights this to be an issue ' Potential for the landfall of export cables and immediate onshore coastal area of cables to be affected by climate change influenced coastal change such as sea-level rise. Potential for impacts to immediate onshore cables with coastal erosion and considerations on the introduction of cable protection materials throughout the cable life'. As well as onshore changes, understanding the mobility of offshore features should be included, e.g. mobility of sandbanks and whether this would risk cable exposure.	Noted. This has been expanded under offshore cabling in Table 28 of the SEA ER.
NRW	Consideration of the impacts of climate change on cable exposure is not explicit in the HRA assessment and should be included as a mitigation option.	Noted Amendment states: '...can be reduced though the use of removable materials (the following study reviewed cable protection options and their removability at end of life);' but then doesn't list the cable protection options.



Respondent	Comment	Response or Action
		Inserted text amended in HRA and also moved to a lower bullet which relates to this point.
NRW	Ensuring that cables are buried to a sufficient depth would avoid cable exposure later and the potential need for cable protection.	Noted. Have added reference to HRA as above regarding climate change and a cable burial assessment
NRW	Design considerations for cable protection: Consideration of the longevity of the cable protection and decommissioning intentions should be considered at the design stage. For example whether long term impacts can be reduced through the use of removable materials (the following study reviewed cable protection options and their removability at end of life) Scour and Cable Protection Decommissioning Study – NECR403 or reducing the impact of the cable protection through design such as reducing the footprint or tapering the structure to facilitate sediment transport	Noted. Have added reference to HRA as above regarding climate change and a cable burial assessment
NRW	P.47 Outlines a summary table of the impact pathways, typical screening distances and pressures used to inform the Plan level HRA. The screening distance for Temporary and Permanent physical disturbance of subtidal and/or intertidal habitats is listed as 'The footprint and immediate vicinity of the works'. This should be expanded to consider impacts within the littoral sub cell as impacts to sediment transport in the nearshore can be far reaching	Noted. At Plan level, physical disturbance is screened based on the footprint and immediate vicinity of works, with indirect effects from changes in sediment transport and physical processes considered separately under relevant pathways (e.g. SSC, sediment deposition and water quality), applying a precautionary tidal ellipse distance (up to 17 km). As a strategic UK-wide assessment, this approach is considered appropriate, with project-level assessments to consider site-specific processes and relevant regional guidance where required. Please see additional rationale in comment responses 71 and 52.
NRW	Temporary loss during construction needs to also consider the impact of depressions from jack up vessels/ anchorage of vessels in sensitive habitats. Evidence from Triton Knoll OWF and Lincs OWF showed that leg depressions may not	Noted. Text has been added to the HRA to acknowledge that temporary seabed depressions may arise from jack-up legs or anchoring during construction. While such effects are recognised (e.g. Triton Knoll and Lincs OWF), this is a strategic, UK-wide Plan-level assessment and does not



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	rapidly infill post construction and can result in a change in sediment character in the depression. Mitigation for Dogger Bank South was to add a condition into the DCO which prevents jack up vessels anchoring within a 1km buffer of Annex 1 sandbanks/MCZs	define construction methods, vessel types or anchoring strategies. These issues will be considered in detail at project level, through EIA, HRA and MCZ Assessment processes once construction methodologies and sensitive habitats are known, and mitigation secured where necessary.
NRW	P.44 of the SEA refers to SoNARR and dates of publication – this has now been published (Natural Resources Wales / State of Natural Resources Report 2025	Noted, this section in the SEA ER has been updated using the SoNARR 2025.
NRW	The HRA also still refers to the River Dee SAC instead of the 'River Dee and Bala Lake SAC' which was raised in earlier correspondence	Having checked the HRA we believe that all references to River Dee SAC are to the Scottish site known as River Dee SAC
NRW	We note some factual inaccuracies / omissions (including sites and features) in the text relating to benthic assessments, though these do not have an impact on the BRAG ratings and overall assessment outcomes. We agree with the BRAG ratings, subject to additional comment provided noting that although scoped out at the Plan level, derogations for Welsh sites may still be needed at the project level, subject to route choice / constraints and cable installation options	Wider comment around project level derogation potential has been addressed.
NRW	HNDFUE Celtic Sea Route, Environmental Baseline and Key Issues within the Study Area: p456 para 1 Text states: "Biodiversity, Flora and Fauna: There are designated sites that interact with the identified route corridors. This includes seven SACs, Bristol Channel Approaches (Dynesfeydd Mor Hafren) SAC, Carmarthen Bay Dunes (Twyni Bae	Noted, this has been amended in the SEA ER.



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	Caerfyrddin) SAC, Culm Grasslands SAC, Kenfig (Cynffig) SAC, Pembrokeshire Marine (Sir Benfro Forol) SAC, Tintagel-MarslandClovelly Coast SAC, and West Wales Marine (Gorllewin Cymru Forol) SAC. The Carmarthen Bay and Estuaries SAC is also within the wider interface areas". The highlighted text is incorrect. The Carmarthen Bay and Estuaries SAC directly overlaps with PDA1 (the route crosses through the SAC).	
NRW	SEA Environmental Report Appendices Appendix F: WCD4-Pen Delta – Ballantrae to Pentir: p293 Summary Environmental Assessment, Biodiversity Flora and Fauna. This section is missing reference to the Menai Strait and Conwy Bay SAC, which directly intersects with the cable route at landfall and therefore needs to be added to the text in para 1.	This site is within the onshore 5km indicative route corridor but can be avoided by the onshore route as the site is designated for marine habitats. It has been added to the description in the SEA ER for completeness.
NRW	Some text is needed in the RIAA document about the difference between the screening outcomes determined at the Plan level for HRA, and specific project level outcomes for the sites that have been screened out of the derogations process. At Plan level, many sites within the impact pathway screening distances (including those that overlap directly with the proposed cable corridors (e.g. Carmarthen Bay SAC)) are given an amber risk rating due to the fact that mitigation measures could be put in place to avoid adverse impacts on site integrity and features. However, at this stage it is not possible to completely rule out AEoSI that could occur at the project level (especially where there are uncertainties on route options and given that there will be	This is covered in the conclusions section of the HRA, however text has been expanded further to cover the following: At Plan level, many sites within the impact pathway screening distances (including those that overlap directly with the proposed cable corridors (e.g. Carmarthen Bay SAC)) are given an amber risk rating due to the fact that mitigation measures could be put in place to avoid adverse impacts on site integrity and features. However, this is not intended to prejudge the assessment of AEoSI at the project level, especially where there are uncertainties on route options and given that there will be site-based engineering constraints. Any technology or configuration change that materially alters environmental pathways, including HVAC phasing that increases cable numbers, trenches and landfalls relative to HVDC



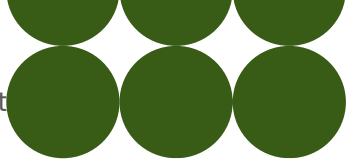
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	site-based engineering constraints). It would therefore be advisable for the RIAA document to include a statement about the risk for derogations still existing at the individual project level, even though they have been screened out at the HND Plan level.	assumptions, should be screened promptly through NESO's monitoring and review process, or at project level via the DCO process and taken through proportionate HRA refresh where necessary.
NRW	P. 65 Permanent loss of seabed or intertidal habitats: This section needs to include habitat features that may be lost or permanently degraded due to changes in physical processes and sediment regimes beyond the immediate footprint of cable installation and protection (as highlighted in our previous comments).	Permanent habitat loss at Plan level has been assessed conservatively based on the footprint of cable protection. Potential effects arising from changes in physical processes and sediment regimes beyond the immediate footprint of installation are addressed separately under the "Temporary disturbance as a result of increased SSC and sediment deposition" and "Changes in water quality" impact pathways, which apply a precautionary tidal ellipse screening distance (up to 17 km). These pathways capture the potential for indirect sediment-related effects beyond the cable footprint. Any requirement for detailed hydrodynamic modelling to assess longer-term morphological change would be determined and undertaken at project level once route alignment, burial depth and protection design are defined.
NRW	p128 Pen Llyn a'r Sarnau SAC qualifying features: Submerged or partially submerged sea caves is missing from the list of qualifying features	This has now been updated in Appendix B
NRW	p157 Severn Estuary SAC: Reefs is missing from the list of qualifying features	This has now been updated in Appendix B
NRW	41. Appendix A – SEA Scoping Consultation Responses, P. 31 Comment no.92 "Q2: Marine Mammals: With regard to the geographical scope, further clarification with regard to the purpose of the PDA and SEA study areas (and their respective buffers)	Noted. The description of potential effects for marine mammals has been expanded within Section 9.1 Assessment of Recommended Designs in the SEA ER regarding the temporal nature of effects across construction, operation and maintenance and decommissioning. Discussion of the potential for cumulative effects has also been expanded in Section 9.2.1



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	should be given. Our current understanding is that the SEA will focus on assessing impacts within the SEA study area + the 15 km buffer. We agree with the temporal definitions, however, recommend that when assessing cumulative effects across the construction, operational, and decommissioning phases consideration should also be given to the total combined impact load introduced by all three phases.” The response provided for this comment (“No action needed”) could be expanded to clarify if the points raised have been fully addressed or not and the reasoning for it. However, based on the information presented in other assessment documents we acknowledge that the first part of our comment regarding geographical scope has been addressed. We continue to recommend that when assessing cumulative effects across the construction, operational, and decommissioning phases, consideration should also be given to the total combined impact load introduced by all three phases. If this approach is already being applied within the assessment, it should be clearly stated to avoid ambiguity.	Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure regarding areas where several preferred Plan cable routes and other planned infrastructure may interact.
NRW	Appendix A – SEA Scoping Consultation Responses, P. 42–43; Comment no.135 “Collision risk has been referred to as “short-term”. While we agree that the risk itself is short-term, a resultant collision event that may lead to mortality would have a high impact and in Welsh waters we advise that this is assessed by	Short-term, as referenced in the temporal scope on p.25, considers the construction phase of the works. The language has been clarified in the assessment in the SEA ER to note that the risk is short-term intermittent (construction, maintenance, decommissioning) but the effect has potential to be long-term if mortality occurs.



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	taking into consideration NRW's mortality limits here." The response provided for this comment does not address these points. It should clearly set out what impact is expected should a collision-related mortality occur, including how this will be evaluated against the relevant mortality thresholds.	Mortality thresholds are a consideration for the RIAA with regard to potential for AEoSI.
NRW	"Disturbance from underwater noise has been described as short-term and temporary. This is correct for single disturbance events (or multiple events where a considerable amount of time passes between each disturbance event), however the assessment should also consider the total additional load of disturbance introduced across repeated disturbance events." The response provided for this comment does not address these points. The response does not explain how multiple disturbance events have been considered within the assessment and that cumulative effects have been evaluated. This consideration is important at this Plan level to ensure that individual project-level assessments appropriately account for the cumulative disturbance load associated with repeated events. Clear acknowledgement of this requirement should therefore be included.	As above, short-term, as referenced in the temporal scope on p.25 of the SEA ER, considers the construction phase of the works. The language has been clarified in the assessment in the SEA ER to note that the risk is short-term intermittent (construction, maintenance, decommissioning) but that the effect has potential to be long-term if mortality occurs.
NRW	Section 3. Assessment Methodology, Scope of HRA Report, Specific Impact Pathways, Underwater Sound P. 40–41 Effective Deterrent Ranges We refer to previous comments made on the use of EDRs: "We do not recommend the use of Effective Deterrent Ranges (EDRs) to assess noise impacts in Welsh waters to	Noted. It is agreed that, at project level, underwater sound assessments should utilise alternative, project-specific modelling approaches in line with NRW (2023) and Sinclair et al. (2023). The use of Effective Deterrent Ranges (EDRs) within this HRA reflects the absence of defined source parameters at Plan level and provides a precautionary screening tool only.



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	retain some flexibility in approaches to the management of noise, and thus usually recommend alternative approaches (NRW, 2023 & Sinclair et al., 2023). While EDRs have been applied in this plan-level HRA, the applicant has advised that project-specific noise modelling should be carried out. We support and welcomes the use of such alternative noise modelling approaches to better assess potential impacts.”	
NRW	Vessel Sound We do not agree with the decision to screen out vessel sound. Whilst it is acknowledged that this impact may be insignificant when compared to the high number of vessels present in UK waters year-round, the evidence presented does not sufficiently support this conclusion. For example, the document states “the increase in vessel movements during the installation works generally involves a small number of vessels”, yet no definition of “small” is provided, nor the expected number of vessel trips quantified. Without this information, the magnitude of the impact cannot be evaluated. Given these uncertainties NRW recommends vessel sound should be screened in for assessment. The assessment should also consider the cumulative impact of multiple vessel movements, based on the expected number of vessels using the area over time/ lifetime covered by the Plan HRA.	Noted. Vessel noise associated with cable installation is continuous, low-intensity and short duration, and is typically generated by a limited number of support and installation vessels operating within areas characterised by high existing vessel traffic and associated baseline ambient sound. At Plan level, the specific number of vessel trips cannot be meaningfully quantified because construction programmes, port selection, logistics and installation methods are not defined and will vary by project. However, the conclusion to scope out vessel sound is not reliant on a numerical threshold of “small” vessel numbers – it is based on the nature of the pressure pathway and the fact that any incremental change in ambient noise from a temporary, project-scale increase in vessel activity is unlikely to be discernible at the population/site integrity scale when compared to existing baseline vessel noise in UK waters. In contrast, the assessment has focused on underwater sound sources with the greatest potential to result in disturbance/injury (e.g. geophysical sources), for which precautionary screening tools are applied. Cumulative vessel noise over the lifetime of the Plan would be driven primarily by long-term baseline shipping and other marine activities, rather than by intermittent installation vessel activity for individual cable projects. Project-level assessments will nonetheless quantify vessel use where relevant and, where appropriate, consider cumulative underwater



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		noise in the context of local baseline conditions and other concurrent activities.
NRW	Section 5 Information to Inform Appropriate Assessment, Impacts to marine mammals and fish from underwater sound, P. 125 This section states... "These are sources which typically produce sound at frequencies outside of the hearing range of marine mammals and fish, are masked by other elements of the installation operations (such as sound from vessel engines, ploughing or jetting), or do not substantially increase the level of sound beyond what these receptors are expected to be habituated to (see Sinclair et al., 2023)." We acknowledge and welcome the clarification provided regarding masking effects and the identification of sound sources contributing to masking. This addresses one of the points previously raised in relation to the above statement. However, we would like to reiterate the following points which remain unaddressed: 1. Reference to habituation and baseline levels The document refers to sound levels that receptors are "expected to be habituated to." We request clarification on whether this refers to baseline sound levels in the area. Please define what is considered to be the baseline noise level at the site, and provide the methodology and data used to determine this. Additionally, what levels of sound increase are expected during installation activities relative to this baseline? 2.	Noted. The reference to receptors being "habituated" has been revised to avoid implying confirmed behavioural habituation. The Plan-level assessment does not rely on quantified baseline sound levels or defined decibel thresholds, as project-specific source parameters, duration and installation methods are not yet available. At this strategic stage, the assessment distinguishes between (i) sources outside the hearing sensitivity ranges of key receptors, (ii) sources masked by concurrent installation activities, and (iii) sources unlikely to materially elevate received sound levels above prevailing ambient conditions in UK waters characterised by existing vessel activity. This provides a precautionary qualitative appraisal consistent with Plan-level HRA expectations. Detailed baseline characterisation, modelling of sound propagation, and evaluation of behavioural disturbance thresholds relative to ambient conditions will be undertaken at project level in line with NRW/SNCB guidance, once equipment specifications and methodologies are defined. The terminology in Section 5, page 125 has therefore been updated to remove the term habituation.



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	Evidence of habituation We advise that any assumption of habituation in marine receptors should be supported by appropriate evidence, such as behavioural or acoustic studies. Please provide the basis for concluding that habituation is expected in the receptor species present in the area. It is advised to clearly distinguish between habituation (a learned reduction in behavioural response to a repeated, non-threatening stimulus) and tolerance (continued presence despite potential stress or disturbance). Please ensure these terms are used appropriately and supported by relevant references. We recommend that this section of the assessment is revised to address the above points and ensure conclusions regarding noise impacts on marine receptors are clearly justified and evidence-based.	
NRW	Section 5 Information to Inform Appropriate Assessment, Airborne sound and visual disturbance to marine mammals and seabirds, P. 253 We refer to previous comments made on the assessment of Airborne sound and visual disturbance: "The document states that "the number of animals likely to be at risk of disturbance is extremely small" based on previous seal behaviour studies. However, the report does not provide sufficient explanation as to how the findings of these studies are applicable to the current proposal or location. We recommend clarification on the geographical and ecological relevance of these studies to the current site (i.e.	Noted. The cited seal and seabird studies inform precautionary disturbance zones at Plan level and are not intended as site-specific predictive modelling. The negligible magnitude conclusion relates to the scale of potential disturbance relative to site conservation objectives and population size, rather than to the absence of behavioural response. Section 5, page 253 of the HRA has been updated the wording around "risk of disturbance is extremely small" accordingly. While development-specific disturbance risk cannot be quantified at this stage due to undefined methodologies and timing, this does not prevent a strategic integrity judgement. The conclusion reflects the temporary, transient and spatially limited nature of cable installation relative to designated populations.



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	transferability of evidence) and how variability in species distribution and abundance has been considered when applying these previous findings to the current proposal. This clarification is necessary to ensure the conclusions regarding disturbance risk are evidence-based and site-specific." The document states that "at this plan-level stage, the risk of disturbance for each individual development cannot be assessed." However, despite this acknowledged limitation, the assessment concludes that the impact is of negligible magnitude. NRW considers that studies presented provide sufficient information to indicate the potential for an LSE in the absence of a project level assessment. This should be clearly recognised within the Plan-level conclusions to ensure that the impact is appropriately carried forward and assessed at project level.	
NRW	Section 5. Screening, Table 6: Screening for MCZs- HND Implementation Plan- Wales, P. 72 We refer to previous comments relating to Table 6: "It is unclear why only "changes in prey availability" is listed as a potential impact pathway. An explanation must be provided for why this particular pathway has been included while others have not. If the exclusion of other pathways is based on the assumption that the Skomer MCZ lies outside the ZOI for those pathways, this should be clearly stated. Furthermore, justification should be made in light of the fact that the grey seal is a mobile species. It is widely accepted that grey seals do not stay within designated site boundaries and may be present within the impact area.	Noted. An explanatory footnote has been added to Table 6 of the Stage 1 MCZ assessment to clarify the basis for screening decisions. Screening for Skomer MCZ was undertaken based on the defined pathway-specific ZOI set out in Section 5, rather than proximity alone. For benthic features, the site lies beyond the ZOIs for seabed disturbance (footprint), SSC and water quality (<17 km), and underwater sound (<5 km), and these pathways were therefore screened out. For grey seal, collision risk is limited to the immediate vicinity of vessels, with screening also considering the relevant Seal Management Unit (SMU). The Celtic Sea routes do not overlap the Wales grey seal SMU associated with Skomer MCZ and do not fall within any defined ZOI for other pathways,



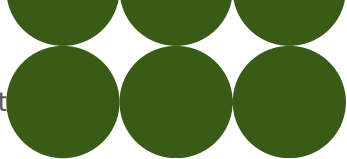
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	It is also unclear why only HND corridors are screened into Stage 1 assessment and not Celtic Sea corridors. The Celtic Sea corridors are closer in proximity to Skomer MCZ, with PDA1_to_Llandyfaelog and PDA2_to_South_Wales_Connection_Node also located within the Wales SMU for grey seal. On the basis of geographical proximity alone, we recommend the Celtic Sea corridors and taken through to stage 1 assessment."	therefore the Celtic sea were not considered further and only "changes in prey availability" was screened into Stage 1 for relevant routes.
NRW	Section 5. Screening, Welsh Sites, Screening Assessment, P. 168 See comment above regarding the inclusion of Celtic Sea corridors.	Noted. An explanatory footnote has been added to Table 6 of the Stage 1 MCZ assessment to clarify the basis for screening decisions. Screening for Skomer MCZ was undertaken based on the defined pathway-specific ZOI set out in Section 5, rather than proximity alone. For benthic features, the site lies beyond the ZOIs for seabed disturbance (footprint), SSC and water quality (<17 km), and underwater sound (<5 km), and these pathways were therefore screened out. For grey seal, collision risk is limited to the immediate vicinity of vessels, with screening also considering the relevant Seal Management Unit (SMU). The Celtic Sea routes do not overlap the Wales grey seal SMU associated with Skomer MCZ and do not fall within any defined ZOI for other pathways, therefore the Celtic sea were not considered further and only "changes in prey availability" was screened into Stage 1 for relevant routes.
NRW	Section 5. Screening, Table 53: Screening Summary P. 169 We note that Skomer MCZ is listed here for "changes in prey availability" and "collision risk". This is inconsistent with Table 6 where only "changes in prey availability" is listed. We recommend that these inconsistencies are reviewed and corrected to ensure alignment across the assessment.	Noted. An explanatory footnote has been added to Table 6 of the Stage 1 MCZ assessment to clarify the basis for screening decisions. Screening for Skomer MCZ was undertaken based on the defined pathway-specific ZOI set out in Section 5, rather than proximity alone. For benthic features, the site lies beyond the ZOIs for seabed disturbance



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	We also note that Skomer MCZ has been removed from the pathways “Airborne sound and visual disturbance” and “Underwater sound”. While this is more consistent with Table 6, it does not address earlier comments requesting justification for excluding these pathways. If the exclusion is based on the assumption that the Skomer MCZ lies outside the ZOI for those pathways, this should be stated. However, NRW recommends these pathways are considered, especially with the recommendation that the Celtic Sea Corridors are considered within the Skomer MCZ assessment.	(footprint), SSC and water quality (<17 km), and underwater sound (<5 km), and these pathways were therefore screened out. For grey seal, collision risk is limited to the immediate vicinity of vessels, with screening also considering the relevant Seal Management Unit (SMU). The Celtic Sea routes do not overlap the Wales grey seal SMU associated with Skomer MCZ and do not fall within any defined ZOI for other pathways, therefore the Celtic sea were not considered further and only “changes in prey availability” was screened into Stage 1 for relevant routes. Skomer MCZ lies outside the ZOI for collision risk and has therefore been removed from the Collision Risk section of Table 55: Screening summary.
NRW	Changes in Prey Availability, P. 203–205 We refer to previous comments made on the assessment of changes in prey availability: “We agree with the overall conclusions presented in this section, however, it is noted that several statements are not supported by referenced evidence, which introduces a risk of speculation. To ensure transparency and robustness, we recommend that key assertions are substantiated with empirical data or appropriate literature wherever possible. For example, the statement: “Cable installation will disturb a small proportion of the total prey species in the area of cable installation, and the loss of prey will result in a low level of change for a short period of time” should be supported by relevant studies or quantitative evidence to validate the predicted scale and duration of impact. Where empirical evidence or literature is not available, we advise that it should be clearly stated that the conclusion is	Noted. The MCZ and HRA text has been updated to clarify evidence transferability and confirm that conclusions relate to site integrity. Detailed disturbance assessment will be undertaken at project level.



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	based on expert judgement. Doing so would maintain clarity around the evidence base and improve the overall transparency and credibility of the assessment."	
NRW	Collision Risk, P. 206–208 We refer to previous comments made on the assessment of collision risk: "This section notes that vessels commonly operate at low speeds for the majority of the installation process. We recommend clarification on the potential risks to receptors during periods when vessels are not operating at low speeds, as the level of impact may differ under these conditions. This section also notes that the number of vessels typically required for each cable installation do not pose a significant increase in marine traffic. However, this assertion is currently unsubstantiated. We recommend that the applicant provide supporting evidence, such as baseline vessel activity data, expected increases, or comparisons with existing traffic levels, to justify this conclusion."	Noted. This is a Plan-level HRA and detailed vessel numbers, transit speeds and baseline traffic comparisons are not available at this stage. The assessment is therefore based on established evidence regarding general vessel strike risk and typical cable installation practices, proportionate to the strategic level of detail. However, Section Collision Risk – Marine Mammals of the Stage 1 MCZ assessment has been updated to clarify the distinction between low-speed installation activities and transit movements, and to explain the basis for concluding that the incremental risk at the site integrity scale is negligible. Detailed vessel activity and traffic context will be assessed at project level once defined.
NRW	Underwater sound, Pg. 224– 232 We understand that Skomer MCZ has been excluded from the list of MCZs at risk from underwater sound. However as outlined in our earlier comment, we maintain the view that Skomer MCZ should be included within the assessment. Our comments from our previous consultation (below) therefore remain applicable in relation to the assessment of underwater sound. "We request further clarification from the applicant on the following points in relation to the statement: "Most activities typically produce sound at frequencies	Noted. Skomer MCZ has been screened out of the underwater sound assessment on the basis of the defined <5 km Zone of Influence for this pathway, which the study corridors do not intersect. Screening has therefore been undertaken on the absence of a credible impact pathway rather than proximity alone. In relation to the wording on 'habituation', we agree that the previous phrasing could imply an unsupported behavioural assumption. The text has now been revised to remove any reference to habituation and instead refer to prevailing ambient sound conditions, without implying behavioural adaptation or tolerance.



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	outside of the hearing range of marine mammals and fish, or in most circumstances do not substantially increase the level of sound beyond what these receptors are expected to be habituated to.” 1. Reference to habituation and baseline levels. The document refers to sound levels that receptors are “expected to be habituated to.” We request clarification on whether this refers to baseline sound levels in the area. Please define what is considered to be the baseline noise level at the site, and provide the methodology and data used to determine this. Additionally, what levels of sound increase are expected during installation activities relative to this baseline? 2. Evidence of habituation We advise that any assumption of habituation in marine receptors should be supported by appropriate evidence, such as behavioural or acoustic studies. Please provide the basis for concluding that habituation is expected in the receptor species present in the area. The applicant is advised to clearly distinguish between habituation (a learned reduction in behavioural response to a repeated, non-threatening stimulus) and tolerance (continued presence despite potential stress or disturbance). Please ensure these terms are used appropriately and supported by relevant references. We recommend revision of this section of the assessment to address the above points and ensure conclusions regarding noise impacts on marine receptors are clearly justified and evidence based.	As this is a Plan-level HRA, baseline noise levels, predicted sound increases and detailed behavioural modelling cannot be meaningfully quantified at this stage because installation methodologies, source parameters and durations are not yet defined. The assessment instead relies on established injury thresholds (e.g. Southall et al., 2019, NMFS, 2024) and conservative disturbance ranges to determine whether a credible pathway exists. Detailed baseline characterisation and project-specific underwater sound modelling will be undertaken at project level where required.



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NRW	Section 7. In-combination effects, Pg. 264-349 We welcome the inclusion of Whitecross Offshore Wind within the in-combination effects assessment. However, we advise that further information is still required on the approach, specifically the rationale for applying a 100km screening distance.	Noted. The rationale for applying the 100 km screening distance has been clarified within Section 7 (In-combination Effects).
NRW	We note the scope of these assessments extends from underwater to landfall – but only as far as substation infrastructure.	This is correct – no action required.
NRW	We agree that relevant matters have been considered, bearing in mind the broad-brush nature of these high-level assessments.	Noted – no action required.
NRW	Locations where the subsea cables emerge and run underground to substations on land. We welcome the inclusion of an objective within the assessment criteria on p.269 of the Holistic Network Design Implementation Plan SEA Environmental Report – Appendices for Protecting and where possible enhancing the landscape and seascape character and visual amenity of our coastal (marine and terrestrial) areas – and due attention on Protecting our statutory designated landscapes (National Parks, National Landscapes – formerly AONBs).	Noted – no action required.
NRW	We are satisfied that an appropriate level of landscape baseline information has been used to inform judgements to inform preferred route option choices – but note that we would expect a much higher level of detail when it comes to	Noted – no action required.



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	future more detailed implementation proposals for a particular landfall.	
NRW	With regards to the SEA, we are satisfied that everything had been addressed appropriately.	Noted – no action required.
NRW	Please note that we have not provided comments for terrestrial birds.	Noted – no action required.
NRW	For high level scoping, we advise that 12km should be used for greater horseshoe terrestrial impacts (8km has been used here, which is insufficient). Please provide confirmation of whether there is a terrestrial point within 12km.	This is already included in the HRA. On page 37 it states 'A 12 km zone of influence would only result in one more European site being screened into assessment for greater horseshoe bat (Pembrokeshire Bat Sites and Bosherton Lakes SAC), which lies 9 km from the marine part of study corridor PDA1_to_Llandyfaelog. The SAC lies well over 12 km from the landfall of that corridor. No sites designated for barbastelle bat would be screened in, with the nearest barbastelle bat site to a study corridor being North Pembrokeshire Woodlands SAC located 40 km north-west of corridor PDA1_to_Llandyfaelog.'
NRW	We advise that 2km is insufficient. We note that 20km was used in the screening, which is more in line with the standard distance. Exact distances at the site(s) can then be informed via survey or mitigation to reduce impact. Ecology of the European Otter published by Natural England is the most suitable document to reference https://publications.naturalengland.org.uk/file/82038 .	The justification for the 2 km distance at AA stage is provided on page 475 of the HRA where it states 'In coastal environments otters do tend to have much smaller home ranges and travel shorter distances (2 km according to Vincent Wildlife Trust).' It is noted that Natural England and Scottish Government have not raised an issue with the 2 km zone.
ScotGov	We have no specific comments in relation to HND or HNDfUE: ScotWind. We wish to clarify that, for HNDfUE: INTOG, IN projects were smaller scale projects up to 100MW with not all IN projects reaching the maximum capacity.	Update to the HND Implementation Plan has been made to clarify the IN TOG distinction.



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ScotGov	We note that, in Section 4, Scotland's National Marine Plan 2 has been mentioned. To clarify, this plan has not yet been adopted or published. A consultation was carried out between November 2024 and February 2025 on a planning position statement, which we recommend clarifying in this section of the assessment.	This has been amended in the SEA ER.
ScotGov	Section 9 includes 'Consideration of Alternatives' within the assessment. We would appreciate additional clarification of what alternatives this refers to, as it lends some confusion on alignment with the reasonable alternatives presented in the SEA, rather than alternatives considered in the other environmental assessments	Section 9 of the SEA ER considers potential strategic level alternatives as part of the SEA process, and also makes reference to the route and option appraisal process that considered many alternative routes and options and which was subject to a light SEA assessment. This section does not consider alternatives that were considered and appraised within the HRA and MCZ assessments – these are discussed within the recommended design appraisals in Section 9.1 of the SEA ER.
ScotGov	We find the approach taken in Section 9.2.1.1 to define intra-plan cumulative impacts in certain offshore areas helpful.	
ScotGov	We would appreciate further clarity on the results of the cumulative assessment with other plans and programmes. The plans and programmes considered have been set out clearly in Table 39, however, it is hard to find any detail on the cumulative effects assessed within these plans and programmes.	Spatial consideration of other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure in the SEA ER. For strategic-level plans, additional text has been added to expand on the potential interaction and in-combination effects, whilst also recognising that there is insufficient detail to fully assess the cumulative and in-combination effects at this strategic level, as there are no confirmed designs or methodologies for each of the cable routes. Relevant plans should be considered and assessed further for the potential for cumulative and in-combination effects at the project level.
ScotGov	We would request clarity on the statement on mitigations suggesting that compensation measures must be	This is not specific to SEA legislation but is in line with the best practise mitigation hierarchy of Avoidance, Minimisation,



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	implemented and that these should be informed by marine spatial planning. We do not understand the implementation of compensatory measures to be required under SEA legislation and, thus, would suggest clarification is needed both on this point and on what spatial planning considerations are being referred to.	Restoration/Rehabilitation, Offsetting/Compensation. Spatial planning did not refer to specific planning requirements but to strategic consideration as to the most appropriate type and location of any appropriate compensation. The text in the mitigation of the SEA ER has been rephrased for more clarity on these points.
ScotGov	A number of references have been provided to Natural England's best practice advice on offshore wind marine environmental assessments. As set out in the reports, this advice only covers English waters but this does not seem to be clear in the SEA. Applicants in Scotland should follow the relevant pre-application advice and engage with the relevant SNCBs in Scotland. MD-LOT has published guidance for offshore renewable energy projects on marine licensing and consenting requirements.	Amended, reference to MD-LOT has been included in Section 10.1.1 and regarding Marine Directorate advice within the mitigation in Table 40 of the SEA ER.
ScotGov	Overall, we would request greater clarity is provided when referring to the Scottish SMP OWE and its associated assessments. As previously mentioned, the draft Updated SMP OWE and associated assessments were published in May 2025, which assesses a greater generation capacity and, thus, concludes differently than the SMP-OWE and assessments published in 2020.	References to the Scottish SMP OWE have been updated to the 2025 document. We can confirm the 2025 document was referenced but the link to, and text describing, the 2020 SMP OWE in Table 25 was not updated, as an error. Table 25 updated in the HRA to reflect the 2025 Scottish SMP OWE HRA
ScotGov	When looking at in-combination assessment, we assume that in-combination assessment was carried out with the Scottish SMP-OWE (2020) as the RIAA states that the SMP-OWE HRA concluded that, with the implementation of mitigation, the plan could avoid adverse effects on site integrity on European sites. The need to review and re-	References to the Scottish SMP OWE has been updated to the 2025 document. We can confirm the 2025 document was referenced but the link to, and text describing, the 2020 SMP OWE in Table 25 was not updated, as an error. Table 25 updated in the HRA to reflect the 2025 Scottish SMP OWE HRA



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	assess the SMP-OWE (2020) resulted in the publication of an updated HRA AAIR in May 2025. This AAIR2 concluded adverse effect on site integrity in relation to bird features both alone and in-combination, and this conclusion remained with the adoption of mitigation measures. This AAIR, published in May 2025, provides a more thorough and up-to-date assessment of impacts on European protected sites and species, and we would have expected this to be considered in the development of HRA for the HND Implementation Plan.	
ScotGov	With regards to in-combination impacts, we would also request further clarity on how existing and planned Scottish projects have been assessed in addition to those included in the draft Updated SMP-OWE (2025).	Projects assessed have been included in Table 25 for the relevant area (East Scotland or West Scotland). The law requires identification of adverse effects on integrity that will arise from the HND Implementation Plan 'alone or in combination with other plans or projects'. Therefore, in combination assessment is only necessary where adverse effects on integrity for the relevant study corridor has been dismissed on its own account. Table 25 lists the other plans and projects considered but the preceding text explains the assessment as follows 'Since it is not possible to undertake a quantitative assessment of impacts for the HND Implementation Plan (since details of actual cable corridors are not set by the Plan) the appropriate assessment has effectively only concluded no adverse effect on integrity if there is either no impact pathway, or there are mitigation measures available that should be able to address impacts at the project level. So, for example, the assessment has not dismissed impacts because they are expected to fall below a particular numerical threshold that might be exceeded when other plans and projects are considered in combination with HND Implementation Plan.' Therefore, due to the approach to assessment there is no potential for AEOI to arise from the Plan in combination that haven't already been identified for the Plan alone



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		and there is no necessity to discuss the other plans or projects in any detail.
ScotGov	In Section 3 of the RIAA, the summary of derogations Test 3 sets out that "If the area providing compensatory measures is not within the European site, it should become designated as part of the European site. Until that happens, it is protected by government planning policy." This is based on guidance and policy applicable only in England and Wales. We would seek to have this clarified and would find it helpful for a reference to be included here setting out what guidance was used to outline this information.	The reference is as follows but the report has been updated to note that the protection in policy applies only in England and Wales: https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site
ScotGov	In discussion of the process undertaken at the project level, we understand that it should be stated that the appropriate authority would be the relevant administration rather than just the relevant Secretary of State.	HRA report updated to add 'or Administration'
ScotGov	For awareness, the NCMPA assessment for the draft Updated SMP-OWE (2025) was carried out as best practice to provide Scottish Ministers with the information to support their duties in relation to MPAs in Scottish inshore (territorial) and offshore waters.	Noted. Reference to the draft Updated SMP-OWE has been updated to 2025 for context in the Stage 1 MCZ assessment report.
ScotGov	In Section 3, it is stated that English guidance has been applied to Scottish MPAs to enable MD-LOT to appropriately consider MPAs and remain compliant with the Marine (Scotland) Act 2010. We find this statement to be unclear and would request that it is clarified.	Noted. Text updated to clarify that MMO (2013) guidance is applied to Scottish MPAs in the absence of equivalent guidance, to provide a consistent Plan-level methodology.



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ScotGov	We note that, in Section 5, the Turbot Bank MPA has been erroneously included alongside English sites rather than the Scottish sites	Turbot Bank MPA is included in Table 3 – Screening for MCZs – HND Implementation Plan – East Scotland of the Stage 1 MCZ.
ScotGov	We understand that the MCZ assessment was carried out ahead of publication of the draft Updated SMP-OWE (2025), as set out in the footnotes in Table 71. However, we would see value added to the assessment of the HND Implementation Plan in incorporating this updated plan and assessment as the HRA conclusions in the AAIR differ from the previous assessment, an NCMPA assessment was undertaken for the first time, and the plan now provides an integrated spatial planning framework for both INTOG and ScotWind. The draft Updated SMP-OWE and the accompanying impact assessments were all published in May 2025.	Noted. The in-combination of the Stage 1 MCZ has been refreshed to reflect the draft Updated SMP-OWE (2025) where relevant. Stage 1 MCZ assessment Section 7 update to table 71 has been made to be more consistent with HRA.
ScotGov	Similarly to comments provided above on the HRA, it is unclear exactly how the full pipeline of existing and planned Scottish offshore wind farms have been considered in the in combination assessment. This is particularly in relation to INTOG projects that were not planned for in the SMP-OWE (2020) or projects that came before that planning exercise. As above, we would appreciate additional clarity on this point. We would also like to understand why Scotland's National Marine Plan and National Planning Framework 4 have not been included in the in-combination assessment for the MCZ assessment but they have been included for the HRA.	Noted. See responses in relation to relevant HRA comments above and the in-combination of the Stage 1 MCZ has been refreshed to reflect the draft Updated SMP-OWE (2025) where relevant along with other relevant plans included.
ScotGov	Similarly to comments provided above on the SEA, we are unclear on what the conclusions or findings of the in-	Noted. A short summary of the in-combination conclusions has been added above Table 71.



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	combination assessment are. We would hope to see this more clearly set out in the assessment.	
ScotGov	We wish to highlight potential concerns about a lack of alignment between the assessment processes carried out by NESO and by Scottish Government. We are particularly concerned with potential misalignment regarding the East of Gannet and Montrose Fields NCMPA. The NCMPA assessment for the draft Updated SMP-OWE (2025) concluded that, for this site, there would be potential effects associated with power cable laying, burial and protection and power cable operation and maintenance from intra-array cabling that would have the potential to hinder the achievement of the conservation objectives of the NCMPA. When looking at potential impacts in-combination with HND FUE: INTOG, it was concluded that an export cable overlapping the NCMPA, as would be required, would increase the overall footprint of the potential effects associated with cabling. The assessment for impact for the East of Gannet and Montrose Fields NCMPA can be found in Table 7 of the NCMPA Assessment.	Noted. The draft Updated SMP-OWE (2025) NCMPA assessment applies a sectoral, worst-case envelope across multiple windfarm developments, including intra-array cabling within option areas. By contrast, the NESO assessment relates to defined strategic transmission study corridors at Plan-level, with a substantially smaller spatial footprint and the application of embedded mitigation and other means of proceeding (OMP), including micro-siting. The Stage 2 conclusion reflects the statutory test of “no significant risk of hindering” conservation objectives, taking account of scale and proportionality. The findings are therefore not considered misaligned, but reflective of different assessment scopes and assumptions.
ScotGov	We would also appreciate additional clarity outlining the specific ‘other means of proceeding’ identified for the East of Gannet and Montrose Fields NCMPA, as this information has been hard to find the specifics of what is being proposed in the Stage 2 report.	Noted. The Stage 2 section in relation to East of Gannet and Montrose Fields NCMPA has been updated to provide clarity on the specific OMP. Stage 2 MCZ assessment Section INTOG has been updated
ScotGov	We greatly value the relationship built between Scottish Government and NESO and hope to continue working together to ensure alignment of our inter-related plans. If	Noted. No change needed.



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	you would like any further information or clarification on the points raised above, we would be happy to discuss further.	
MMO	The report does not explicitly state that the Department for Energy Security and Net Zero (DESNZ) Secretary of State (SoS) is the competent authority for NSIPs in English waters. The language used refers generally to “consenting authorities” and advisory bodies, without naming the DESNZ SoS as the competent authority. Please explicitly state that DESNZ are the competent authority for NSIPs in English waters.	Reports have been updated with DESNZ/SoS as the Appropriate Authority for the HND Implementation Plan HRA.
MMO	HRA RIAA (page 21); HRA Derogations Report (page 7): The MMO welcomes the clarification that, for subsequent Nationally Significant Infrastructure Projects (NSIPs), the competent authority is the Secretary of State for the Department for Energy Security and Net Zero (DESNZ). This appropriately limits the role of the Marine Management Organisation (MMO) in English waters to that of a statutory consultee within the planning process, alongside the Planning Inspectorate for NSIPs.	Noted. No change needed.
MMO	HRA RIAA (page 21); HRA Derogations Report (page 6): The MMO also welcomes the clarification of roles, which confirms that the MMO’s responsibilities are specific to English waters.	Noted. No change needed.
MMO	HRA Derogations Report (page 25): The MMO welcomes the changes that explicitly acknowledge the need to consider impacts beyond individual cable effects. For the Dogger Bank Special Area of Conservation, the report states that the estimated habitat loss from the	Noted. No change needed.



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	cables "does need to be considered cumulatively with the habitat loss due to other aspects of the wind farm." While the report applies a "small percentage" justification (for example, noting that export cable protection across three corridors accounts for approximately 0.001% of the Dogger Bank SAC), the MMO notes positively that cumulative data are incorporated to provide a more complete assessment of potential impacts.	
MMO	SEA Environmental Report (Page 186): Explore Marine Plans is referred to as the "UK Government's Marine Plans Explorer Map Viewer" - this is inaccurate as this is only for English Marine Plans, not the whole of UK. Rephrase this sentence to "These can be seen within the Marine Management Organisation's Explore Marine Plans online mapping service".	This has been amended in the SEA ER.
MMO	SEA Environmental Report (Page 556): Note regarding East Marine Plan being replaced is missing from p556 plans and programmes considered for cumulative/in-combination effects.	This has been amended in the SEA ER.
MMO	SEA Environmental Report: 1. It is unclear why the clean maritime plan has been listed as a plan/programme/policy/legislation related to the "Water" SEA topic when the clean maritime plan relates to the decarbonisation of the ports and shipping sector. This would sit better within Climate Change/Air Quality.	This has been amended in the SEA ER.
MMO	2. It is unclear from the response to scoping comments whether the fishing activity data used is consistent across the different NESO projects (e.g. HND and SSEP) as the	HND are currently using a methodology that was constructed and agreed through consultation for HND and HNDFUE. This methodology will ultimately be surpassed (for SSEP and CSNP).



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	response simply states, 'no action needed', while the appendix data listed is simply "UK Fishing Activity-Areas of high intensity fishing effort".	The data available at HND/HNDFUE has been built upon since. SSEP has not yet been completed/published, and its remit differs from the HND, so where there is benefit in applying data consistently across Plans, NESO are exploring this, but must be conscious of the evolution of data over time.
MMO	It would be beneficial for future consultations to provide additional detail when comments are responded to as 'no action needed'. If this is because comments are being ignored/pushed back on explain why, if it is because the comment is already incorporated state that it is the case.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved. This will be considered in future consultations
MMO	MCZ Stage 1 (page 188); MCZ Stage 2 (page 19): The MMO recommends increasing the avoidance distance for the North East of the Farnes Deep Highly Protected Marine Area to a maximum of 4 km. This site is of significant ecological importance, supporting higher levels of biodiversity in comparison to the wider Northern North Sea region. Increasing the avoidance distance will help to ensure that this HPMA continues to maintain its ecological function.	Noted. The Stage 1 and Stage 2 assessments recognise the ecological importance of the North East of Farnes Deep and apply a 2 km precautionary buffer, consistent with published Natural England and JNCC conservation advice for HPMAs. This approach is considered proportionate at Plan level, given the strategic and non-spatial nature of the study corridor and the absence of defined installation methodologies at this stage.
MMO	MCZ Stage 1 (page 25); MCZ Stage 2 (page 12): The MMO welcomes the clarification that, under Section 126 of the Marine and Coastal Access Act (MCAA), the Marine Management Organisation (MMO) has a duty to consider Marine Conservation Zones (MCZs) in English waters during marine licence decision-making, and that where projects are determined to be Nationally Significant Infrastructure Projects (NSIPs), this duty falls to the Secretary of State for DESNZ. The MMO requests that these responsibilities are	Noted. Text has been updated in MCZ Stage 1 (page 25) and MCZ Stage 2 (page 12) to clarify that, where a project constitutes a Nationally Significant Infrastructure Project, the statutory duty under Section 126 of the Marine and Coastal Access Act 2009 rests with the Secretary of State (DESNZ) as the relevant decision-making authority.



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	clearly reflected in Figure 1 (MCZ Stage 2, page 12). The report positions the SoS as an informed decision-maker at the plan level rather than defining a specific statutory duty for them within the marine licensing flowchart itself, which remains focused on the MMO and "the authority". Please make it clearer that there is a duty on the DESNZ SoS to consider NSIP MCZs in marine licensing decisions.	
MMO	The MMO recommends that the potential impacts of UXO and UXO clearance should be factored into the MCZ assessment. UXO clearance has the potential to compromise the integrity of MCZs.	The approach to Unexploded Ordnance is discussed in the MCZ report. It is stated in the report that the lack of defined methodologies for each cable route means there is no clear approach to the possible presence of Unexploded Ordnance (UXO). Typically, the risk of UXO explosion, and surveys to locate potential UXO are addressed in a separate assessment. It is assumed that this is the case for HND and HND FUE, and therefore UXO are not considered as part of this Plan level MCZ assessment.
MMO	The MMO welcomes the further detail provided on the reasoning for moving the Other Means for Proceeding (OMP) test to Stage 2, acknowledging that this represents a departure from standard regulatory guidance.	Noted. No further action required.
MMO	The MMO notes that it is unclear whether the habitat loss associated with R4_6_to_Penwortham is the same as, additional to, or instead of the habitat loss associated with R4_5_to_Penwortham. While the report presents information that implies these are two separate and additive schemes, it does not include a clear explanatory statement. The MMO advises that this distinction should be made explicit to avoid ambiguity.	Noted. R4_5_to_Penwortham and R4_6_to_Penwortham are not alternative alignment options but form separate route corridors connecting different generation assets to Penwortham substation. As such, they may be progressed cumulatively. The Stage 2 assessment has been amended to clarify that these routes are distinct schemes and that the habitat loss and potential effects presented for each are additional where both are constructed. Clarification text has been inserted at the start of both Stage 2 subsections to remove any ambiguity. Text updated in Stage 2 MCZ.



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MMO	The MMO welcomes the inclusion of specific references to site conservation objectives, as this supports a clearer assessment of whether any permanent loss of habitat could pose a risk to the achievement of those objectives.	Noted. No further action required.
MMO	The MMO welcomes the inclusion of cumulative effects within the assessment framework, recognising that cumulative loss can result in significant impacts. However, the MMO continues to request more specific contextual information on previously installed cables, including the extent and type of protection used and any mitigation measures applied, as this level of detail has not yet been incorporated into the assessment. This information would help to build a better picture of the scale of impacts. It would also be helpful to have more detail on which industry best practices from previous schemes will be taken forward on future schemes, and where these best practices might not be taken forward and why.	Noted. Existing operational cables within MCZs form part of the established environmental baseline and their footprints are reflected in the current extent and condition of designated features. The in-combination assessment therefore considers whether HND, either alone or in combination with other relevant Plans or projects, would hinder the achievement of conservation objectives relative to that baseline. The in-combination assessment has focused on proposed and consented projects whose impacts are not yet fully realised and which may represent future cumulative pressure. Given the strategic nature of the HND Implementation Plan and the absence of defined engineering parameters at this stage, it is not considered proportionate to undertake a retrospective quantitative search of historic cable protection footprints. However, a precautionary worst-case footprint has been applied, with detailed cumulative assessment to be undertaken at project level where design parameters are confirmed. Additional text has been inserted within the cumulative effects section on MCZ Stage 1 to clarify this approach and to provide further context.
Historic Environment Scotland	We welcome the engagement throughout the development of both the HND and HND FUE programmes. As is reflected in the provided high level assessment of the various components much work will be required at the project level stage to ensure that impacts on the historic environment resource in Scotland are minimised and mitigated and we	



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	look forward to continuing to work with stakeholders as projects progress.	
Historic Environment Scotland	World Heritage Sites As is noted under the Biodiversity topic the recently inscribed World Heritage Site of the Flow Country is designated as a blanket bog system and is not inscribed for cultural significance. St Kilda is inscribed for both natural and cultural significance.	Noted, this has been amended in the SEA ER.
Historic Environment Scotland	Historic Wrecks We welcome the information given here in relation to the maritime historic environment baseline in Scotland. However we would bring your attention to 2 recent additions that have been designated as Historic Marine Protected Areas. On 11 August 2025 Scottish Ministers confirmed the designation of two new Historic Marine Protected Areas (HMPA). These are Scapa Flow at Orkney and the Queen of Sweden off the coast of Shetland. These HMPA designations came into effect on 1 November 2025. There are therefore now 10 HMPA designations in Scotland as opposed to the 8 reported in the assessment baseline summary.	Noted, this has been amended in the SEA ER.
Historic Environment Scotland	Summary of Existing Pressures and Issues for Cultural Heritage This summary notes that development pressures are affecting the historic environment in Scotland. This would include pressures such as those associated with the impacts on the setting of coastal heritage sites as a result of large scale renewable energy projects and their associated infrastructure. These effects on the historic environment are	Text has been expanded on this point in the SEA ER.



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	reflected in associated assessments such as the recent consultation on the Updated Sectoral Marine Plan for Offshore Wind Energy.	
Historic Environment Scotland	In noting the comment relating to Historic Environment Records in England we would reiterate the comments we made at the scoping stage. These comments clarified that HERs are held by Local Authorities in Scotland as well as in England. It should be noted that some of the data in the Scottish HERs for undesignated assets may not be held on Canmore/Trove.scot.	Noted, this has been included in the baseline description for Cultural Heritage in the SEA ER.
Historic Environment Scotland	Review of Relevant Plans and Programmes We welcome the updating of this review in respect of our comments at the scoping stage. For information, Historic Environment Scotland have recently published a Managing Change Guidance Note on Conserving our Underwater Heritage.	Noted. This has been added to Table 25 and Appendix D of the SEA ER.
Historic Environment Scotland	SEA Objectives We welcome that our recommendations given in response to the Scoping Report have been acted upon. These were focused on updating the objective for cultural heritage to reflect that enhancement may not always be possible and that the target should refer to avoidance.	
Historic Environment Scotland	Mitigation We are generally content with the approach to mitigation outlined in this section. In seeking to minimise setting impacts it should also be noted that the introduction of screening may serve to cause greater levels of impact. Given the high level assessment presented here it will	Noted, text referring to the use of screening around infrastructure has been amended in the SEA ER to state that this should be subject to appropriate project level considerations of the local area.



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	therefore be important that project level assessment consider the impacts of infrastructure proposals and informs and influences the location of sub-stations etc to minimise impacts on the historic environment.	
Historic Environment Scotland	We are generally content to agree with the findings of the assessments of the individual components of the HND/FUE presented in the environmental report appendices. Throughout the assessments much weight is placed on the ability of cable route designs etc to avoid historic environment assets within the 5km corridor. It will therefore be important that project level assessment fully considers these issues and designs accordingly to deliver the mitigation relied on this assessment. As you will be aware we have previously commented on the route corridors throughout their development. We welcome that the assessment findings reflect our input and would particularly note that need for careful consideration at the project level to deliver mitigation by design. It will be of particular importance in areas where cumulative issues have been identified where several projects and routes coalesce e.g. around Peterhead.	A statement has been added to the beginning of the mitigation Section 10.1 in the SEA ER that project level assessment should fully consider the issues highlighted in the assessments.
Natural England	As the strategic environmental assessments have been carried out after the spatial planning exercises have been finalised, the conclusions are unlikely to influence the final recommended designs. Natural England (NE) would like to re-iterate that undertaking these strategic assessments is a really positive step. It needs to be recognised that some of the designs recommended through the HND/HND/FUE are currently at the DND (project level) stage and some are in	NESO have added further clarity to the HND Implementation Plan regarding the timing of strategic-level environmental assessments versus earlier published reports. The assessments have made reference to available information from projects BUT must remain an assessment of the Plan (i.e. the parameters set by the 5km wide study corridors) and not stray into assessing individual developers proposals, for which there is a separate process. The



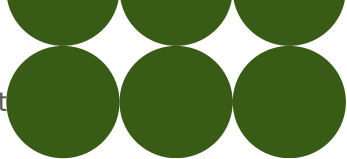
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	examination. The information available for these projects needs to be considered within the Plan level assessments. It is noted that the Plan level strategic environmental assessments have been undertaken after the outputs from HND and HNDFUE were finalised. The most up to date and relevant information still needs to be included as part of the MCZA and HRA process. For example, Morgan and Morecambe offshore wind farms are consented and the transmission assets are currently waiting recommendation. The strategic assessments need to reflect the most up to date information (please see below for more information).	HND Implementation Plan and its HRA/MCZ are inevitably a 'snapshot' of a point in time, as with any plan. Arguably consented developments could be omitted entirely from the HRA (except in combination) but that would involve frequent changes to the Plan. Instead there is a cycle over which the Plan will be updated. Consented wind farms would be included in the 'in combination' assessment (as these are not part of the Plan). If 'transmission assets are waiting recommendation' then in principle they have not yet been fixed or finalised. It is important that the HRA and MCZ of the Plan assess the Plan and not the subsequent cable projects which are subject to their own HRAs.
Natural England	The messaging of the Plan level assessments needs a clear caveat about the conclusions of the plan level assessment and what should be undertaken at Project level (DND stage). NE welcome that Environmental Design Principles (EDPs), which we have previously advised, have now been incorporated into the environmental assessments as a recommendation (HRA RIAA, pg 588).	Noted. No change needed.
Natural England	We continue to advise that a strong steer at Plan level and mitigation is passed on to projects on the avoidance of designated sites and adherence to Best Practice. This could significantly reduce the environmental impact at project level and would be a good outcome. Inclusion of EDP goes some way to providing a steer at project level. Once a project impacts a MPA at project level, recent consents have often required compensation, which is a time consuming and costly process. Therefore the best gains, in terms of both reducing	Ultimately, NESO is constrained by the legal powers it has and therefore the extent to which the HND Implementation Plan can be binding on developers. As it stands NESO does not have any legal power to force developers to conform with the HND Implementation Plan or the recommendations or mitigation measures identified in its HRA. The status and purpose of the HND Implementation Plan and environmental assessments in planning is instead to provide oversight, and strategic mitigation recommendations for developers. The law will require projects to implement relevant measures through their own HRA process and that will include (as identified in their project levels



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	environmental impacts and smoother consenting, are made by avoidance at the Plan level. Likely Significant Effect (LSE) should include an in-combination assessment. An in-combination Assessment should be completed as part of the screening process to ensure no LSE in-combination with other plans or projects and so no impact pathways and pressures are screened out prematurely. It is a requirement of the Regulations to consider the impact of projects either alone or in combination at both the Likely Significant Effect (LSE) screening stage and during the Appropriate Assessment (AA) stage. The 'alone or in-combination' requirement has been included in the Directive and Regulations in order to make sure that prior to their authorisation the effects of numerous small proposals, which alone would not result in a significant effect, are further assessed to determine whether their combined effect would be significant enough to require more detailed assessment.	HRAs) measures such as those identified in the Implementation Plan AA as being suitable. Since the Implementation Plan cannot bind developers (even to a specific route corridor) the purpose of the mitigation section in the AA is to confirm that subject to detailed development there are mitigation measures which have been successfully applied before and should be able to be applied for these projects. Moreover, because the Plan is not binding on developers it also means that ultimately there is complete scope for AEOI to be avoided or adequately mitigated at the project level because there is total freedom for the developer to design around constraints. Our status in planning and limited authority to enforce mitigation is outlined within our HND Implementation Plan, Environmental Assessments, and also our HND Implementation Plan FAQ document issued alongside the suite of reports during the public consultation. NESO have also included a section on 'Future Project Development and Consenting' within the HND Implementation Plan which outlines the distinction between the strategic nature of the HND Implementation Plan and the subsequent project level developments. A figure has also been produced within the HND Implementation Plan to clearly illustrate how roles and responsibilities vary across the development of an offshore wind farm cabling project - from initial strategic recommendations through to detailed project development and consenting.
Natural England	NE note that there will be a three-year review process for HND Implementation Plan and 'In addition to this formal three-yearly review period, a programme of monitoring will be carried out to capture the evolution of HND and HNDFUE project level developments in line with the HND Implementation Plan.' NE welcome this review process but	With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would result in the Plan being revised more frequently than the current three-



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	advise that should significant information become available that a trigger is implemented to review the documents prior to the three-year review period. All associated documents should be reviewed during this process, so they are all aligned.	year schedule. The Plan aims to guide the developments and mitigation but that developers are required to implement relevant measures through their own environmental assessments.
Natural England	NE strongly support the undertaking of the environmental assessment for the offshore coordination and welcome this approach following our previous feedback. We welcome inclusion of MCZA as part of the suite of environmental assessments (pg 33). Onshore infrastructure does not fall under the scope of this HND Implementation Plan, nor the SEA (but will be covered at a later stage by the CSNP). NE advise that the environmental assessments include environmental impacts from both onshore and offshore. It appears that some onshore elements are considered in the assessments but a more holistic approach would be advised and the outcomes from the CSNP need to be incorporated into the current HND Implementation Plan assessments.	With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates, updates across SEP Plans, or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would results in the Plan being revised more frequently than the current three-year schedule. The Plan aims to guide the developments and mitigation but that developers are required to implement relevant measures through their own environmental assessments.
Natural England	NE welcome the recognition of the benefit of exploring options for strategic mitigation and reinforcing recommendations for developers (pg 5).	
Natural England	Pg 37 states 'With regards to Plan monitoring, NESO will be responsible for tracking the development of the HND/HNDFUE projects included in the draft HND Implementation Plan towards successful consenting. Contrary to updates captured as part of the NESO Impact Assessment process,	With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates, updates across SEP Plans, or wider industry knowledge, will be captured. This also captures 'triggers' or



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	deviations from the original HND/HNDFUE radial connection recommendations would not be assessed formally within our future assessments, however they would be included as part of the revised baseline for future Plan updates to ensure cumulative impacts can be accurately assessed.' Tracking any deviations from the original Plan is vital and NE advise that there is an accurate record of project level developments to understand the impact of the HND Implementation Plan in real time. A record of the actual design that is used at project level, as well as projects which have undergone an Impact Assessment (IA) is imperative to future spatial planning exercises. From figure 2 it appears that NESO will be involved as part of the consultation process at project level, therefore they will know details of individual projects. It should be a recommendation that this information is collated and available and who should be responsible for this action.	'material changes' that would results in the Plan being revised more frequently than the current three-year schedule. The Plan aims to guide the developments and mitigation but that developers are required to implement relevant measures through their own environmental assessments.
Natural England	The draft HND Implementation Plan and assessments only include two (pg 24) of the IAs, Southern and Northern Cluster). Three more have been approved since this cut-off date in August 2024: Ossian; Muir Mhor; and Collab. We advise that all approved IAs are incorporated into the baseline for the HND Implementation Plan and associated assessments. It is noted that more IAs may be submitted. NE kindly request that we have sufficient warning and consultation time to review and provide feedback to NESO.	Noted. No change needed.



Respondent	Comment	Response or Action
Natural England	Cross Boundary Projects within the Plan Transboundary effects are accounted for as part of the RIAA and MCZA Stage 1 assessments (Section 6 Pg 494 and Section 8 Pg 351, respectively). NE continue to advise that wider strategic delivery of mitigation, compensation and monitoring should be considered to de-risk future projects. How the cross-boundary assessments for routes that traverse from Scottish to English waters and potential compensation for impacts on MPAs will be managed needs to be clearly defined. NE would like to understand how assessments for environmental impacts, through the consenting process across different countries, and how strategic compensation could be provided for these scenarios. Ideally a single consenting process for individual projects that cross borders is needed to enable the required join up to fully understand the overall impacts at Project Level (DND) and how required strategic mitigation and compensation measures will be delivered.	While NESO note the point regarding the potential evolution of consenting process, NESO do not have jurisdiction over this, and it is not within our current strategic remit. NESO, however, continues to engage with stakeholders (both DEFRA and NE) on the best approach to strategic delivery of mitigation, compensation and monitoring. To date current legislation relates more to project level undertaking and applying those to Plans is challenging since NESO is not delivering the Plan. For example, NESO are currently considering how initiatives such as the NRF and MRF (which is currently still in consultation by DEFRA) can be best addressed by future SEP Plans.
Natural England	Natural England advise that we welcome Plan Level mitigation which includes adherence to best practice, commitment to low order deflagration in line with the unexploded ordnance clearance joint position statement, and use of noise abatement methodologies where appropriate. NE would welcome commitments to the completion of Project UXO surveys, prior to application to Marine Management Organisation for licences, so that assessments are based on realistic scenarios, in accordance with the Marine environment: unexploded ordnance clearance joint interim position statement1.	Noted, the HRA has been updated to clarify that UXO clearance, where required, may generate impulsive sound with method-dependent disturbance ranges and any UXO works will be subject to separate project-level HRA informed by site-specific surveys and relevant best practice guidance. At this strategic stage, UXO requirements and clearance methodologies are not defined. It would therefore not be proportionate to apply a precautionary 20 km EDR or prescribe specific techniques, mitigation measures or seasonal restrictions at Plan level. These matters will be assessed and secured, where necessary, through project-level consenting processes. Text around this has been added to the UXO section of the report.



Respondent	Comment	Response or Action
	Moreover, Plan Level mitigation could specifically require Projects within the 20km EDR2 to adhere to seasonal restrictions on UXO detonation. Please note the updated EDR and update the reference within the HRA RIAA.	
Natural England	It would be useful to understand if the Round 4 assumptions, in particular the Export Cable Regional Assessment (ECRA), NIRAS (2022), have been used to inform the assessment. The ECRA (NIRAS, 2022) categorised the Southern North Sea SAC, for harbour porpoise, as red risk rating and high feature vulnerability. The conclusions within the RIAA do not appear to align with this. The Humber Estuary is red risk rating for grey seal and also has high feature vulnerability.	Thank you for highlighting the Round 4 Export Cable Regional Assessment (NIRAS, 2022), which has been reviewed. The red risk ratings and vulnerability classifications were developed within the specific context of the Round 4 offshore wind programme, including impact piling and strategic cumulative build-out assumptions. By contrast, the HRA for the HND and HND FUE Plan relates to subsea cable installation only and does not include impact piling or equivalent high-energy sources. The assessment framework and activity assumptions therefore differ materially. The Southern North Sea SAC and Humber Estuary SAC have been fully considered based on the defined impact pathways relevant to this Plan, and the conclusions reached are considered robust within that context. No change needed. Both the Round 4 ECRA/HRA and the HND HRA are correct in their own right, but they apply different scopes and assumptions, so therefore they are inherently slightly different. The Round 4 plan can be found here: https://www.thecrownestate.co.uk/our-business/marine/round-4-plan-level-habitats-regulations-assessment and here: https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-001384-%E2%80%98plan%20level%E2%80%99%20Habitats%20Regulations%20Assessment.pdf.
Natural England	The use of spring tidal excursion ellipses is helpful for estimating the potential extent of direct changes to the tidal regime as well as the zone of greatest influence for sediment	Noted, a 17 km has been implemented by this assessment to represent the mean maximum tidal excursion ellipse, as opposed to the maximum reported for specific locations. Any similar, but uncommon occurrences of



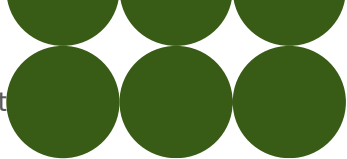
Respondent	Comment	Response or Action
	plumes, As a ballpark figure, 10–15 km is within the range of values used for a number of offshore projects (although larger values e.g. Five Estuaries have been used (14–17 km)). For OWFs, it is expected that OWF developers will use site-specific spring tidal excursion ellipses for their developments. The text in the report refers to impacts from hydrodynamic changes (i.e. erosion) and sediment transport as well, and for some impacts other than sediment disturbance, determining the Zone of Influence will also need to draw upon information on, for example, coastal sediment cells/pathways. For example, longshore drift being interrupted by the presence of cable protection measures in the nearshore. Such changes could also affect receptors further afield than a tidal ellipse. The MCZ Assessment Stage 1 (pg 233) recognised that the tidal ellipse can be greater than 15 km. Appendix A (Pg 11, 73, 93) states one tidal ellipse is 15 km, whereas within the RIAA (pg 96) the tidal ellipse is stated as 17 km. NE agree with the latter (17 km) as this is based on evidence. We advise there is consistency between the documents to provide the confidence that all sites within 17 km have actually been screened in. We advised that the screening step is reviewed to ensure all sites within 17 km have been captured for further analysis. Please clarify whether increasing the threshold to 17 km would result in more MPAs being considered at Stage 2. We suggest that the assessment is reviewed so that no designated sites have been screened out prematurely, and	tidal excursion ellipses beyond 17 km will be picked up at the project level, when benthic survey data and physical process are considered for each cable route. As this is a UK wide Plan-level assessment, the general screening approach is necessarily strategic in nature. However, a footnote has been added to clarify that the interpretation of Zone of Influence in nearshore environments may vary depending on regional guidance. Project-level assessments should have regard to the relevant national guidance applicable to the location of the scheme. The 15 km references in HRA Appendix A were outdated and therefore updated to the corrected 17 km tidal excursion ellipse but did not materially change the report outcomes.



Respondent	Comment	Response or Action
	should amendments be required then the assessments are updated accordingly.	
Natural England	Permanent loss of seabed or intertidal habitats (HRA RIAA, pg 65) should also have consideration for habitat features that may be lost or permanently damaged as a result of indirect impacts Thanet Coast SAC is designated for features, sensitive to indirect impacts from cable activities (i.e. suspended solid concentrations, sub-features of reef). Features of this SAC are sensitive to cable activities, such as pressures of smothering and siltation rate changes (light) and changes in suspended solids with a risk factor of medium to high. NE do not agree with the BRAG rating for this SAC. It is not possible to confidently conclude that the SAC will be avoided at project level, as the cable corridor intersects the designated site. Should the SAC be avoided it is necessary to still consider indirect impacts from cable activities as the pressure benchmark for smothering/siltation and suspended solids is medium-high. A BRAG rating of green is not appropriate at this stage, it should be precautionary and we advise amber.	Noted. In this HND Plan-level HRA, "permanent habitat loss" is defined as enduring habitat conversion or alteration within the physical footprint of hard protection or permanent substrate change. Indirect effects beyond the footprint, including changes in suspended solids, deposition and smothering pressures, are assessed separately under the SSC/deposition and physical processes pathways. While indirect sediment-related effects may extend beyond the footprint, these are typically temporary and recovery-based pressures rather than permanent habitat loss, unless there is evidence of long-term morphological change. The potential for such longer-term change is inherently dependent on route alignment, installation method, burial depth and protection design, and therefore cannot be meaningfully quantified at this strategic stage. Where corridors intersect designated sites, these matters will be examined in detail at project level, informed by site-specific survey data and, where required, modelling. The assessment framework therefore captures both direct permanent loss and indirect sediment-related pressures through distinct but complementary pathways, and is considered proportionate and appropriate at Plan level. The RAG rating has assessed Thanet Coast SAC as Amber for permanent habitat loss and for temporary disturbance arising from increased suspended sediment concentrations and deposition.
Natural England	The Holderness Coast is often referred to as one of the most rapidly eroding coastlines in Europe. Sediment moves predominantly towards the south, the area acts as a sediment source for designated sites such as the Humber Estuary and the Wash and the direction of sediment flow is likely to be heavily influenced by Smithic Bank. Changes to	Noted. However, this is a detailed matter for project design at the planning application level. The HRA report does acknowledge that longshore sediment transport is something that cannot be assessed at the Plan level, as follows: 'There are also some impact pathways that cannot be



Respondent	Comment	Response or Action
	sediment supply may also result in impacts to geological features such as Spurn Head which is a feature of both the Humber Estuary SAC and Holderness Inshore MCZ, and could also influence sites to the north such as Flamborough SAC and beyond. Essentially, the placement of cables in this specific location has the potential to cause significant and far ranging indirect impacts to a number of designated sites. Further consideration of sediment processes in this area and impacts from cable activities (including external rock protection) is required and mitigation needs to be addressed.	considered at this Plan level. For example, it is not possible to assess impacts on longshore sediment drift at Plan level as these details are not available and the appropriate distance to use for assessment of longshore drift is unique to each stretch of coastline. Additionally, this is a physical processes assessment and one that would typically be modelled at project level. However, based on the information available this HRA does generally explore whether there are options for an impact to be avoided (by for example detailed routing) before discussing options for mitigating an impact.'
Natural England	The Outer Thames Estuary, Greater Wash and Liverpool Bay SPAs all need careful consideration for the feature Red Throated Diver (RTD). The widespread distribution of the non-breeding red-throated diver (RTD) interest feature of these SPAs is highly sensitive to disturbance/displacement from infrastructure and certain activities. There is potential to impact RTD through various pathways e.g. physical loss of habitat, physical change to habitat, changes to prey abundance or availability, indirect habitat loss through disturbance and displacement due to the presence of mobile structures (e.g. vessels). The potential for an activity to impact RTD through all pathways must be considered (where relevant) but to date the primary impact pathway of concern has been indirect habitat loss through disturbance and displacement of RTD. In each of these SPAs, NE has advised that levels of disturbance of RTD, and consequent indirect loss of habitat through displacement, are such that adverse effects on site integrity cannot be ruled out.	If mitigation is potentially feasible (and it has to be considered so until the project level) then by the methodology used and approved by our ESG Stakeholder, it should be scored amber (i.e. needs detailed investigation at project level but there is potentially effective mitigation available). To give a red rating would require derogation, despite the fact mitigation (seasonal avoidance) is potentially available.



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	Therefore where the HND/HNDFUE corridor is within (or within 2km of) the SPA we advise a red BRAG score, unless seasonal restrictions can be secured as mitigation. NE is increasingly becoming concerned in relation to disturbance and/or displacement of red-throated divers from the more persistent presence of subsea cable-related vessels which could make a meaningful contribution to in-combination effects on the SPAs. NE highlight that there is not currently an agreed method for Plan level assessment, and departures from Project level assessment methodologies are frequently treated as precedent setting by later Projects. We note that the assessment is presented as being precautionary ('the precautionary principle must be applied') as was the similar methodology used for R4. It is becoming apparent from R4 Project level assessments that this is not the case, with total impacts calculated for some species significantly exceeding Plan level estimates. NE welcome the recommendation to carry out a vessel disturbance assessment to inform further analysis where seasonal restrictions are not possible. At this early stage, as cable corridors fall within both The Wash and Liverpool Bay SPAs it is advised that a red BRAG rating is applied at Plan level.	
Natural England	Nature Inclusive Design (NID) is addressed in the HRA RIAA (Pg65/66). NE welcome the inclusion of our previous comments and our current advice for casework and that we would not currently consider NID as mitigation within a MPA. NE have a current casework position and advise, until evidence demonstrates otherwise, NID should not be	Noted. No change needed.



Respondent	Comment	Response or Action
	installed within MPAs. For external cable protection, once the mitigation hierarchy has been applied, we agree with the use of a similar size rock to the receiving environment as set out in the cables Best Practice.	
Natural England	Decommissioning needs to be considered upfront along with consideration of removability of infrastructure at end of life. The design and type of external cable protection should be considered upfront when it has not been possible to bury the cable to the target depth. The decommissioning intention should be to remove any external cable protection at end of life, and so removable materials would be preferable as well as reducing the impact through design (smaller footprint, physical processes considered)³. NE advise that other mitigation could be included as part of this section. It should be highlighted that cables should be buried to a sufficient depth to avoid external cable protection, either during installation or at a later date (i.e. when a cable is exposed). Confidence in cable burial through technology to prevent the requirement for external cable protection should be included as mitigation.	This text is already included on page 66 of the HRA
Natural England	Mitigation needs to include adherence to Best Practice and provide greater detail which will be carried through the Project Level (DND).	Noted
Natural England	As well as permanent loss of habitat, any temporary loss during construction also needs to be considered. These include the impact of depressions from jack up vessels/ anchorage of vessels in sensitive habitats. Evidence from	Temporary loss during construction is already assessed as a separate impact pathway within the Appropriate Assessment. The HRA has been updated to acknowledge potential seabed depressions from jack-up legs and anchoring, with detailed assessment and any necessary mitigation to



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	Triton Knoll OWF and Lincs OWF have demonstrated that leg depressions may not rapidly infill post construction and can result in a change in sediment character in the depression. Mitigation for Dogger Bank South was to add a condition into the DCO which prevents jack up vessels anchoring within a 1km buffer of Annex 1 sandbanks/MCZs.	be determined at project level once methodologies and sensitive habitats are defined.
Natural England	NE continue to disagree with the following text (Derogations Report, pg 28/29) 'It must be acknowledged that the HND Implementation Plan occupies the top tier of the planning hierarchy. No subtidal sandbank loss will actually occur due to the adoption of the Plan; rather it will arise as a result of individual schemes being consented and Public 29 delivered. This consenting process for individual schemes is not a matter for NESO but for the relevant consenting authorities (whether The Planning Inspectorate, Marine Management Organisation, Scottish Government, Welsh Government or another body). Those bodies will be required to produce their own HRAs, including derogation assessments as necessary, before any individual schemes can be consented.) Please refer to the Crown Estates Round 4 Plan Level HRA where conclusions stated '...it is not possible to recommend that The Crown Estate's Appropriate Assessment should conclude that the Round 4 Plan alone and in-combination will not have an AEOI of this Protected Site...This is due to the potential for the Round 4 Plan to cause habitat loss and direct damage from Preferred Projects 1 and 2, which would be contrary to the restore conservation objective for the feature's extent and distribution attribute, which is required to achieve favourable conservation status.	The quoted text is legally correct regarding the role of the HND Implementation Plan and of NESO in derogations and compensation. There is a distinction between the Crown Estates Round 4 assessments (which are for wind farms) and the HND Implementation Plan (which is for export cables) so they wouldn't necessarily reach the same conclusion. There is also a significant distinction in role: The Crown Estate is a landowner and a consenting body. NESO is only involved in strategic planning and has no further role or authority in the process. This is a consistent approach and methodology as used throughout the HND environmental assessment process. It is therefore a statement of fact that the HND Implementation Plan will not authorise any schemes and that there is a further tier of HRA that would be undertaken at the DCO level. However, there appears to be no contradiction in practice between the text from the Crown Estate Round 4 HRA quoted and the HND Implementation Plan Derogations Report. The Round 4 HRA text states that the Round 4 Plan will have an adverse effect on integrity on at least one protected site and therefore a Plan-level derogations case is required. The same approach has been taken to HND Implementation Plan where for four corridors a conclusion of no AEOI cannot be drawn and therefore a Plan level derogations case is required. Updates to the HND Implementation Plan have been made to clarify the distinction between our Plan vs Project assessment and associated roles and responsibilities.



Respondent	Comment	Response or Action
		As NESO progress our future SEP Plans, we would welcome follow up discussion with NE on this for CSNP etc.
Natural England	Although Adverse Effect on Integrity (AEoI) has been concluded for Dogger Bank SAC, project level compensation is challenging to deliver, so we advise that strategic compensation is considered. The Round 4 Dogger Bank projects (R4_1 and R4_2) have now completed the examination stage (awaiting decision) and the project level compensation should be referenced. Dogger Bank D (PA_1) is still in the pre-application stage and therefore strategic compensation can be considered at Plan level. Therefore we advise that the library of measures developed by COWSC for strategic marine compensation should be considered. Coastal compensation measures may require further discussion. NE advise that early discussions are imperative to ensure it is possible to secure and deliver the necessary compensation measures and therefore ensure that the Plan is deliverable. Mitigation needs to include adherence to Best Practice and provide greater detail which will be carried through the Project Level (DND).	Strategic compensation has been considered in the Derogations report. Much of the detail here appears appropriate to the application-level rather than the Plan. The Round 4 Dogger Bank projects are wind farms and therefore aren't actually part of the Plan; however, a reference will be added that R4_1 and R4_2 have now completed examination. Ultimately, however, the assessments must remain an assessment of the Plan (i.e. the parameters set by the 5km wide study corridors) and not stray into assessing individual developers proposals.
Natural England	The removal of structures as a compensation measure is not currently considered a viable strategic option. Therefore the only plausible strategic compensation measure is new site designation, including extension of the existing site. This compensation measure is also the only benthic compensation listed in the Offshore wind development: library of strategic compensation measures5: • MPA designation and/or extension – for adverse effects on	Noted. Text has been added into the Derogations report that Natural England have advised the Dogger Bank D developer that all of the above measures, other than new site designation/extension are not suitable for impacts on benthic habitats.



Respondent	Comment	Response or Action
	the seabed (benthic habitats) This strategic compensation measure will be delivered through the Marine Recovery Fund (MRF)6.	
Natural England	NE welcome that HDD is no longer proposed as mitigation at Plan level and that our previous advice has been incorporated into this updated version. NE advise that all cable installation, including the use of HDD, should avoid designated sites. Geotechnical investigations would be required to support any application, and they are challenging to consent in their own right within designated sites. NE suggest any cable corridor that intersects a MPA needs to be precautionary (i.e. AMBER) at this early stage as there is still the potential that the cable route could intersect the MPA, for avoidance of doubt and lack of evidence at this stage, we advise these routes are AMBER.	The study corridors are 5km wide to provide routing flexibility in project development. Given the mitigation hierarchy, with avoidance being the first step, it is therefore appropriate for the HRA and MCZ to take the approach that unless the entire corridor overlaps with an MPA it is possible at the Plan level to avoid adverse effects on integrity. It is noted that at the project level an individual developer may choose to route their cable through an MPA but any such change would be captured by the project-level HRA and MCZ processes.
Natural England	NE continue to disagree with the BRAG rating (Green) for Saltfleetby Theddlethorpe Dunes and Gibraltar Point SAC. It is noted HDD is no longer proposed but the cable corridor still intercepts this designated site. We are concerned about the construction and operation of the associated landfall infrastructure including the permanent compound which may impact on functionally linked land for SAC natterjack toads and SPA birds in the surrounding area, including temporary and permanent habitat loss and disturbance or displacement from noise and vibration. Amber would be a more appropriate BRAG rating at this early stage of the process.	No cable corridor traverses Saltfleetby-Theddlethorpe Dunes although at its closest R4_3 to Weston Marsh lies approximately 100m inland. However, this is a 5km wide study corridor and therefore there is considerable room for any export cable within the study corridor to avoid the SAC, if necessary by several kilometres. The HRA has been corrected to reflect the 100m separation distance between the study corridor and SAC.



Respondent	Comment	Response or Action
Natural England	NE note that “it is the intention of NESO to avoid any interaction with an HPMA, and that refinement to reduce the width of the current 5 km wide study corridor is planned before project level’ as stated in the Stage 1 assessment. NE continue to advise that Highly Protected Marine Areas are areas of the sea designated for the protection and recovery of marine ecosystems. They prohibit extractive, destructive, and depositional uses, allowing only nondamaging levels of other activities to the extent permitted by international law. The key purpose of HPMAs is marine nature recovery. Designating areas of sea with high levels of protection, will allow nature to recover to a more natural state, allowing ecosystems to thrive. NE consider HPMAs should be out of scope and not be considered in the MCZA since they have the highest level of protection in English waters and it is Defra policy that there should be no extractive, destructive or depositional activities in them. North East of Farnes Deep was designated as a HPMA on 14 June 2023. As noted in the MCZA report, the conservation objectives of North East of Farnes Deep is to: • achieve full recovery of the protected feature, including its structure and functions, its qualities and the composition of its characteristic biological communities present within the North East of Farnes Deep Highly Protected Marine Area, to a natural state, and • prevent further degradation and damage to the protected feature, subject to natural change.	The MCZ screening is based upon the original study corridors put forward for assessment in order to show the manner in which the MCZ has influenced the designs. However, as documented in the MCZ Stage 2 report, the study corridor in this location has been narrowed by 2 km to allow for a buffer zone from the HPMA. The corridor remains 3 km wide at its narrowest, which provides ample room for routing around obstacles.



Respondent	Comment	Response or Action
Natural England	It is a concern that this HPMA is within Stage 2 of the MCZA for some of the HND and HNDFUE designs. NE note that HPMA's became a material consideration from the point of consultation on 6th July 2022, which post-dates the recommended designs, however, protected features within the site cannot be affected by project activities and there can be no impact on these designated sites which have the highest level of protection. HPMA's must be avoided.	The MCZ screening is based upon the original study corridors put forward for assessment in order to show the manner in which the MCZ has influenced the designs. However, as documented in the MCZ Stage 2 report, the study corridor in this location has been narrowed by 2 km to allow for a buffer zone from the HPMA. The corridor remains 3 km wide at its narrowest, which provides ample room for routing around obstacles.
Natural England	Please ensure consideration is taken for the conservation advice North East of Farnes Deep HPMA – Conservation Advice JNCC Resource Hub and defer to JNCC for further information and advice with this site	Noted. This has already been captured within the assessments. No change needed.
Natural England	The strategic MCZ assessment needs to include the most up to date information and align with project details that are currently in examination. One of these projects is Morgan and Morecambe offshore wind farm. NE have advised that the nature, scale and duration of impacts from lasting habitats change/loss from the placement of cable protection is likely to hinder the 'maintain' habitat feature conservation objectives of the Fylde MCZ. NE advised the Applicant that the MCZ assessment should proceed to a Stage 2 assessment and provide a without prejudice MEEB case. Whilst the cable protection is in situ, the extent and distribution attribute of the site features can neither be maintained or restored, nor can the impacts be considered temporary even if removal is secured at decommissioning. As NE have advised that the developer will require MEEB for impacts on Fylde MCZ, the applicant has submitted a 'MEEB in-principal' proposal into Examination. Both NE and the	This information from Morgan and Morecambe OWF is noted



Respondent	Comment	Response or Action
	developer have agreed that strategic benthic compensation is the way forwards for this project.	
Natural England	NE disagrees with the referencing of the following statement in the MCZA Stage Two report 'This development sets precedence that it is possible to install a subsea cable across the Flyde MCZ without significant risk of hindering its conservation objectives (NE, 2025)' We request that the reference associated with the sentence is removed, as it is misleading. The reference refers to the conservation Advice for the MCZ and not that NE agree that the Conservation Objectives will not be hindered. Also as set out on Advice on Operations (AoO), power cables and telecoms are differentiated due to the difference in impact levels. This sentence is inaccurate and misleading.	Noted. The paragraph has been revised to provide factual context regarding previous cable installation within the MCZ, while ensuring that the assessment of the current proposal is considered on its own merits and in line with the relevant regulatory framework.
Natural England	This MCZ is described as having permanent habitat loss attributed to mandatory cable crossing. It is proposed that three locations of cable crossings will be required. The report states that each crossing will be 750m long and 10m wide and therefore 7500m². NE advise it is not appropriate for the calculation of habitat loss to be represented as a percentage of seabed habitat loss within the total area of the MPA as it is not reflective of the environmental impact. The impact must be assessed against feature level. The 0.00865% figure is meaningless from an environmental assessment perspective. NE reiterates its advice that presenting impacts considered as a percentage of the whole MCZ is misleading. Furthermore the 'multiple cable routes have successfully	Noted. The text has been amended to remove reference to percentage loss of the total MCZ area and to focus assessment at the feature level. The assessment has been refined to ensure it reflects the pressures and decommissioning considerations specific to subsea power cables.



Respondent	Comment	Response or Action
	been installed' and that 'This development sets a precedence that it is possible to install a subsea cable across Fylde MCZ' is not a comparable example. A subsea power cable has a significantly greater impact on the receiving environment compared to a telecommunication cable, so no precedence has been set here (please refer to Subsea Cables Best Practice document and Advice on Operations). There are also decommissioning considerations, whereby the recovery of a shallow buried or surface laid telecommunications cable is likely to be a short-term temporary disturbance whereas deeper buried cables or those protected by external cable protection such as rock placement may require more invasive interventions to enable removal. Telecommunication and power subsea cables are not comparable, and an assessment that properly considers the pressures for power cables should be applied.	
Natural England	We continue to advise that the route that intersects North-East of Farnes Deep HPMA needs amending so there can be no impact at project level or there will be considerable consenting risk for this development. This needs to be resolved at Plan level. Reducing the cable corridor in order to avoid intersecting the HPMA at project level is not a resolution. This reduction in the corridor will not allow for other unknowns at the project level, such as presence of boulders/sensitive habitats and the possibility of micro-siting will be greatly restrained. Furthermore physical process consideration requires a greater scope within the corridor to consider the implications of bedforms and	Although the study corridor has been narrowed by 2 km to allow for a buffer zone from the HPMA, the corridor remains 3 km wide at its narrowest, which provides ample room for routing around obstacles. The decision was made to reduce the size of the route rather than moving the whole study corridor to avoid the risk of the 5km corridor overlapping with/encroaching on other projects or infrastructure. According to the HND Implementation Plan design principles cables can be 100m apart; therefore, it is considered that reducing the study corridor to avoid the HPMA but leave a 3 km wide corridor at its narrowest is the better option, and wouldn't significantly impact on its effectiveness.



Respondent	Comment	Response or Action
	sediment migration that may occur and result in remedial measures at a later date. There also needs to be a 2km buffer around the boundary of the HPMA. The MCZA Stage Two report does state that 2km buffer is achieved, but this appears to be due to the reduction in cable corridor width.	
Natural England	NE welcome the updated document which now provides the correct links as well as links to the live designated sites view page, so the latest updates are available.	Noted.
Natural England	NE welcome Appendix A of the SEA Environmental Report which sets out previous comments and subsequent actions. NE support this approach to engagement and consultation and advise that all future NESO consultations adopt the same process.	Noted.
Natural England	NE note that all our comments have been addressed. We continue to advise that decommissioning has greater representation as we do not agree that all impacts are likely to be short-term. Additional external cable protection can be required at decommissioning and this impact needs consideration. We advise that additional issues are included for the decommissioning phase in relation to impacts/pressures on habitats and removal of infrastructure at end of life.	Noted. This has now been specifically referenced in the high-level effects in Table 28 and the mitigation in Table 40 of the SEA Environmental Report.
Natural England	Protected landscapes and landscape character have different definitions and are covered by different policy, plans and programmes e.g. the duty set out in the Levelling Up and Regeneration Act (LURA) in relation to protected landscapes does not relate to landscape character. We	Noted. Protected landscapes and landscape character have been separated in Table 28 of the SEA ER. Regarding LURA, reference to this only for protected landscapes and not landscape character areas has been



Respondent	Comment	Response or Action
	advise that separating protected landscapes from landscape character (pg 321) would provide a greater level of clarity for the SEA. We note the text that has been included in the report to outline the LURA but in order to fully understand the landscape character within a zone, we advise that it would be useful to identify the landscape character types using the NE Landscape Character Areas mapping tool.	made. Landscape character area tools have been used within the environmental assessment of the recommended designs.
Natural England	We recognise that the data layers for Marine Irreplaceable habitats (MIH) are currently not available but welcome this is considered as a data gap. We will share the data layers for MIH as soon as we are able.	Noted. No change needed.
Natural England	Climate change should also be considered in terms of subsea cable exposure. The SEA report (Pg 66) refers to the mitigation which have the potential to avoid and/or reduce the permanent loss of seabed or intertidal habitats. There should be wider considerations in terms of mitigation and this list should be expanded to include an assessment of the impacts of climate change on the exposure of the cable through a Cable Burial Risk Assessment (CBRA).	No specific mitigation is provided on p.66 of the SEA ER (however it is noted that information on the specific habitats and receptors impacted by development should be further detailed and considered at the individual project level). The potential for climate change to influence cable exposure has been added to the mitigation in Section 10.1.1 of the SEA ER.
Natural England	In the SEA report (pg 305) it highlights the 'Potential for the landfall of export cables and immediate onshore coastal area of cables to be affected by climate change influenced coastal change such as sea-level rise. Potential for impacts to immediate onshore cables with coastal erosion and considerations on the introduction of cable protection materials throughout the cable life'. This should be expanded to consider offshore changes and an	Noted. This has been expanded under offshore cabling in Table 28 of the SEA ER.



Respondent	Comment	Response or Action
	understanding of the mobility of offshore mobile habitat features should also be included. For example the mobility of sandbanks and whether this is a risk for future cable exposure.	
Natural England	NE have previously responded to the SEA Scoping consultation for the SSEP. We advise that advice provided within the response letter is also considered for this HND Implementation Plan consultation, where appropriate.	Noted. This was considered following a review of the comments received at the Scoping Stage before the production of the HND Implementation Plan and SEA ER.
Natural England	NE welcome the comments log provided in the SEA Report Appendix A. We would like to see this process being adopted across all NESO consultations so that it is evident how previous comments have been considered and where further advice may be required. This also enables a method to track progress as spatial plans develop.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Natural England	NE also request that, where possible, that NESO consultations do not overlap with each other. Previous feedback regarding the schedule of consultations has advised that NESO align all their consultations to avoid crossovers with SSEP, CSNP and HND/HNDFUE, as well as Impact Assessments.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Natural England	NE would be grateful for consultation schedules so that time and capacity can be built in to work planning and, where required, other specialists within NE can be consulted internally. A programme of consultations to enable a forward look would be very useful to secure the necessary time from colleagues.	We appreciate and acknowledge the feedback given on the how stakeholders feedback and when. The depth and breadth of feedback that has been requested from environmental and wider stakeholders across NESO is extensive and we continue to utilise feedback we have received to help inform other processes being undertaken.



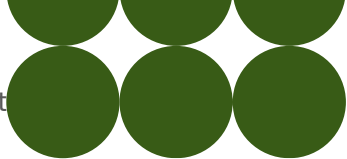
Respondent	Comment	Response or Action
Natural England	The focus is on avoidance of environmental impacts. We would like to see delivery of the HND/HNDFUE also focus on environmental opportunities. These may include but not limited to nature recovery and biodiversity net gain. As previously advised the HND/HNDFUE provides a real opportunity to deliver these environmental opportunities more strategically in conjunction with stakeholders developing net gain strategies. NE are aware of OFGEM and NGET commitments around biodiversity, natural capital and landscape. NE would like to see similar commitments through the HND/HNDFUE, including but not limited to, enhancing the natural environment and improving the visual impact. Marine Net Gain (MNG) is not currently a formal policy, but Government have consulted on it and indicated their intent in their response to extend net gain to the sea. NE has continued to work on a range of evidence projects to help develop the thinking on how net gain in the marine environment could work ahead of any future decisions Government may make on how and when to progress it. Notwithstanding this, there is a real interest from industry and wider stakeholders to have a mechanism that enables a strategic approach to nature positive, supporting infrastructure consenting and wider marine nature recovery. NE are working with partners and stakeholders to recommend and develop how best this can be achieved and how this could be embedded in strategic planning and decision making.	While NESO see the merit of having strategic oversight in the development of these environmental opportunity schemes, The HND Implementation Plan is not considered an appropriate vehicle for delivering such schemes. This is due not only to the scope of the Plan, assessing 5km wide study corridors, but also the Plans limited status in planning, with the design corridors being recommendations rather than enforceable at a project level. These aspects make it impossible to predict and quantify accurately potential impacts and opportunities at a strategic level. NESO are currently feeding into various stakeholder working groups, such as the Natural England Nature Restoration Fund and DEFRA Marine Recovery Fund. We are keen to continue working closely with stakeholders to share any strategic oversight we may have as we conduct our various Strategic Energy Planning activities.



Respondent	Comment	Response or Action
ScottishPower Renewables	SPR recognises the significant effort to consolidate and assess all grid connections recommendations made through the Holistic Network Design (HND) process into a single plan that provides stakeholders with greater clarity on delivery, especially in clustered connection areas across Great Britain.	Noted.
ScottishPower Renewables	We strongly welcome NESO's decision to move beyond high-level comparative appraisals and undertake formal strategic-level environmental assessments to support the HND recommendations. This approach reflects the position we set out in our response to the previous National Grid ESO consultation on Connections Reform in Summer 2023, where we called for centralised strategic network planning to be underpinned by robust and transparent feasibility assessments, clear audit trails of decision making, and alignment with development consenting. SPR emphasised that any new process should include strategic-level environmental assessment to demonstrate the acceptability of options in planning and environmental terms, ensuring a proportionate and predictable basis for project delivery. Notwithstanding some specific issues and omissions as highlighted in our response below, we are therefore pleased that NESO has now undertaken a suite of strategic level environmental assessments to support the HND recommendations. SPR welcomes the opportunity to respond to this consultation, and we trust our comments are helpful. We would be pleased to discuss any aspect of our response and would welcome further dialogue on the identified issues.	Noted.



Respondent	Comment	Response or Action
ScottishPower Renewables	A. Present spatial cumulative outcomes in the core Plan narrative We recommend that spatially defined cumulative impact assessment conclusions are presented clearly within the main bodies of both the Implementation Plan and the Strategic Environmental Assessment (SEA) Environmental Report, with short summaries for each relevant interface area. This is needed to clearly confirm to developers, stakeholders and relevant communities whether or not the HND recommendations are likely to generate significant environmental effects. The summary information should include the cumulative impact assessment conclusions for those locations where multiple recommendations converge or share connection points, in order to demonstrate the scale and acceptability of cumulative effects and supports efficient consenting in all clustered areas across Great Britain.	The cumulative assessment has been expanded in Section 9.2 of the SEA ER.
ScottishPower Renewables	B. Confirm principle of acceptability and avoid burden shifting to projects and Transmission Owners Given that earlier HND recommendations were made without a formal SEA, the final Plan and its assessments should confirm the general principle of acceptability and consent viability for relevant connections and associated infrastructure. Without clear Plan level evidence, a disproportionate burden falls on individual projects and Transmission Owners to demonstrate acceptability through EIA and consenting. This creates challenges for applying the mitigation hierarchy and for the robust assessment of	Ultimately, NESO is constrained by the legal powers it has and therefore the extent to which the HND Implementation Plan can be binding on developers. As it stands NESO does not have any legal power to force developers to conform with the HND Implementation Plan or the recommendations or mitigation measures identified in its HRA. The status and purpose of the HND Implementation Plan and environmental assessments in planning is instead to provide oversight, and strategic mitigation recommendations for developers. The law will require projects to implement relevant measures through their own HRA process and that will include (as identified in their project levels HRAs) measures such as those identified in the Implementation Plan AA as



Respondent	Comment	Response or Action
	reasonable alternatives. It also makes it harder to explain locational need and cumulative impacts to stakeholders and communities, and limits the ability to rely on National Planning Framework 4 and Local Development Plan support. A robust final Plan and suite of impact assessments is essential to reduce the risk of challenge to consents and to underpin the credibility of underlying connection recommendations.	being suitable. Since the Implementation Plan cannot bind developers (even to a specific route corridor) the purpose of the mitigation section in the AA is to confirm that subject to detailed development there are mitigation measures which have been successfully applied before and should be able to be applied for these projects. Moreover, because the plan is not binding on developers it also means that ultimately there is complete scope for AEOI to be avoided or adequately mitigated at the project level because there is total freedom for the developer to design around constraints. Our status in planning and limited authority to enforce mitigation is outlined within our HND Implementation Plan, Environmental Assessments, and also our HND Implementation Plan FAQ document issued alongside the suite of reports during the public consultation. NESO have also included a section on 'Future Project Development and Consenting' within the HND Implementation Plan which outlines the distinction between the strategic nature of the HND Implementation Plan and the subsequent project level developments. A figure has also been produced within the HND Implementation Plan to clearly illustrate how roles and responsibilities vary across the development of an offshore wind farm cabling project - from initial strategic recommendations through to detailed project development and consenting.
ScottishPower Renewables	C. Explain the Plan to project relationship The Plan should set out how strategic conclusions are to be used by projects and authorities. It should explain how Plan level findings guide project scoping and proportionality, where scope reduction is justified, and how project monitoring and evidence will inform subsequent iterations of	Ultimately, NESO is constrained by the legal powers it has and therefore the extent to which the HND Implementation Plan can be binding on developers. As it stands NESO does not have any legal power to force developers to conform with the HND Implementation Plan or the recommendations or mitigation measures identified in its HRA. The status and purpose of the HND Implementation Plan and environmental assessments in planning is instead to provide oversight, and strategic



Respondent	Comment	Response or Action
	the Plan so that new information leads to timely and proportionate updates.	mitigation recommendations for developers. The law will require projects to implement relevant measures through their own HRA process and that will include (as identified in their project levels HRAs) measures such as those identified in the Implementation Plan AA as being suitable. Since the Implementation Plan cannot bind developers (even to a specific route corridor) the purpose of the mitigation section in the AA is to confirm that subject to detailed development there are mitigation measures which have been successfully applied before and should be able to be applied for these projects. Moreover, because the Plan is not binding on developers it also means that ultimately there is complete scope for AEOI to be avoided or adequately mitigated at the project level because there is total freedom for the developer to design around constraints. Our status in planning and limited authority to enforce mitigation is outlined within our HND Implementation Plan, Environmental Assessments, and also our HND Implementation Plan FAQ document issued alongside the suite of reports during the public consultation. NESO have also included a section on 'Future Project Development and Consenting' within the HND Implementation Plan which outlines the distinction between the strategic nature of the HND Implementation Plan and the subsequent project level developments. A figure has also been produced within the HND Implementation Plan to clearly illustrate how roles and responsibilities vary across the development of an offshore wind farm cabling project – from initial strategic recommendations through to detailed project development and consenting.
ScottishPower	Apply the Impact Assessment process consistently, with published triggers	With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future



Respondent	Comment	Response or Action
Renewables	We support the use of the HND Impact Assessment process and note its application to the Southern Cluster and Northern Cluster design changes. We recommend that NESO publishes a simple trigger matrix and confirms that triggers apply to all relevant parties, including transmission owners and interconnector sponsors as well as offshore wind developers. Triggers should capture technology changes between HVDC and HVAC, relocation of interface points, corridor realignment, adjustments to multi terminal topology or bundling, and phasing that increases landfalls or materially scales the onshore footprint. The Plan should also explain how completed Impact Assessments update the Plan baseline and, where relevant, the strategic assessments. Where an Impact Assessment results in a materially different environmental footprint, NESO should commit to proportionate reassessment and clear public signposting of that change. To aid transparency and consistent decision making across HND and HNDfUE, NESO should publish a concise IA trigger matrix, provide examples of what constitutes a significant change, and maintain a simple change decisions log that evidences consistent treatment of changes.	monitoring phases and expectations around how changes, such as individual HND/HNDfUE project updates or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would result in the Plan being revised more frequently than the current three-year schedule.
ScottishPower Renewables	Due to character limit on this MS Online Form please refer to SPR's response submitted to NESO's consultation mailbox for points E – J	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
ScottishPower	E. Clarify technology assumptions and manage configuration variance Several conclusions within the Plan and the assessments are	Technical clarification has been added to the HND Implementation Plan to explain the use of a standardised set of assumptions when coming up with



Respondent	Comment	Response or Action
Renewables	sensitive to assumed technology and configuration. We recommend that the final Plan includes a short technology note that identifies where conclusions depend on HVDC versus HVAC, on bundled versus separate links, or on phasing that increases landfalls or onshore footprint. Any materially different configuration should be screened through the Impact Assessment process, with proportionate reassessment and targeted consultation where appropriate. NESO should also confirm how proposals for HVAC phasing in corridors initially assessed on an HVDC basis will be screened for Impact Assessment, including where phasing would materially increase cable numbers, trenches and landfalls compared with original assumptions.	designs and linked it into where we already state that delivery is ultimately the responsibility of the developer, and they may wish to change tech etc.
ScottishPower Renewables	Provide clear statements on dependencies and delivery risk We ask NESO to provide concise statements on dependencies and anticipatory investment considerations for coordinated or multi terminal solutions, with diagrams that clearly state what is in scope and what is illustrative, for example any depiction of Western Link bootstrap assets or additional terminals. This should include a clear statement on the interrelationship between WL2 infrastructure and MachairWind, the circumstances in which WL2 components may proceed independently, and the implications if the MachairWind timeline changes.	We received several comments during our public consultation which touched on aspects which are out of the scope of both our HND Implementation Plan and our environmental assessments. Where relevant, we will forward on these comments on to NESO departments which are covering such areas.
ScottishPower Renewables	Strengthen governance, terminology and clarity about roles The final Plan should identify the Competent Authority, adopt the correct term, SEA Post Adoption Statement, for post adoption reporting, and present a monitoring framework that tests effects against predictions rather than only	The HND Implementation Plan section "HND Implementation Plan Iteration Schedule" has been expanded to cover more detail on the monitoring phases and the expectations around how individual HND/HNDFUE project



Respondent	Comment	Response or Action
	tracking project progress. Where changes are significant in SEA terms, the Plan should commit to a formal update of the Plan and its assessments, rather than relying on an interim light approach. For clarity in public reporting, references to an internal workstream title should not be used in place of NESO as the legal entity. NESO should explain how the three year Plan reviews dovetail with project level EIA timetables to avoid open ended uncertainty. A short definition of significant change, with practical examples linked to the IA trigger matrix, should be included so stakeholders understand when formal Plan and assessment updates will be required.	updates, as well as Impact Assessment changes, will be captured in future iterations.
ScottishPower Renewables	H. Improve scoping engagement in future iterations We note that SEA scoping focused on statutory Consultation Authorities with no opportunity for developer input. Future iterations of the plan and associated impact assessments should provide structured opportunities for developer engagement at scoping and evidence gathering stages, to ensure that plan level conclusions reflect the most current technical understanding and on the ground constraints.	Noted. To be considered as part of future consultations.
ScottishPower Renewables	Identify plan level mitigation that cascades to project delivery The plan should identify strategic or plan level mitigation measures and indicate how these will cascade into project design, management and consenting, including where projects share landfalls, cable corridors or interface points.	The HND Implementation Plan has been expanded to show that while the Plan aiming to guide the developments and mitigation, developers are required to implement relevant measures through their own environmental assessments.
ScottishPower	Recognise practical challenges and close the methodology gap	Clarification added to the 'Design Changes: Impact Assessment' section.



Respondent	Comment	Response or Action
Renewables	We ask NESO to recognise and communicate the practical challenges that have arisen when taking coordinated designs forward, including the balance between radial and coordinated approaches and the implications for delivery risk and complexity in subsequent stages. The final plan should also address concerns that earlier options appraisals were primarily relative comparisons and should show how strategic conclusions give confidence on consentability and deliverability, not only how the chosen option compared against other options.	
ScottishPower Renewables	SPR supports the decision to undertake a Strategic Environmental Assessment. We appreciate the extensive data analysis and related work undertaken by NESO to prepare the individual assessments for each HND connection recommendation.	Noted. No action needed.
ScottishPower Renewables	We welcome the use of interface area assessments and ask that their cumulative conclusions are brought into the main Environmental Report with short, plain English summaries for each relevant area. This will give clear statements on the scale and acceptability of cumulative effects in clustered locations across Great Britain.	These updates have been reflected in the SEA ER.
ScottishPower Renewables	SPR recognises that the consideration of (reasonable) alternatives is a fundamental element of SEA. Unfortunately, as drafted the assessment of alternatives in Section 7.1 of the SEA ER is relatively limited as it does not clearly consider whether different combinations of feasible spatial options to connect individual offshore wind farms (i.e. different cable corridors and/or connections points) would generate	Section 7.1 of the SEA ER discusses the strategic alternatives, which is required under the SEA legislation. In addition, all routes were subject to NESO's equal footing appraisal and all short-listed designs also went through a light SEA appraisal, considering the potential for positive and negative environmental effects, as detailed in the Appendices



Respondent	Comment	Response or Action
	different likely significant effects. Further work and reporting would therefore be helpful to provide a more robust description of all identified reasonable alternatives (including those at option / corridor level), a more robust assessment of these reasonable alternatives and more robust justification for the selection of the connection recommendations against these in line with statutory requirements. The assessment of reasonable alternatives should describe feasible corridor and interface combinations, explain interactions between options for different projects, and provide a transparent selection rationale that aligns with statutory requirements. As the SEA Regulations and associated caselaw limits the need to describe the selection of and assess alternatives to only those that are deemed "reasonable", any options which were initially identified but then discounted on feasibility grounds (economic, environmental, technical or other) should not require to be considered further.	
ScottishPower Renewables	The SEA monitoring framework should focus on considering actual effects against impacts predicted in the SEA. It should identify where new or different significant effects arise and set out how these findings will trigger a formal update to the plan and its assessments where appropriate. Regional or sub regional conclusions should be summarised in future iterations to make findings practical and decision ready.	The HND Implementation Plan has taken forward a commitment to monitoring the effects of Plan implementation, to be updated in advance of the next Plan cycle.
ScottishPower	We support the overall conclusion that the plan is not expected to have an adverse effect on site integrity in most cases. We ask that the final HRA clarifies the reasoning that links mitigation feasibility to conclusions on site integrity, so	NESO has reviewed the text in the HRA but considers this is already explained sufficiently in the section of the conclusion on 'mitigation', specifically on pages 590 and 591. In short, at the Plan level the consideration of 'mitigation' is based upon whether there are feasible



Respondent	Comment	Response or Action
Renewables	that there is no misinterpretation of how an inability to mitigate would be treated at plan level.	methods that are known to be effective and which could be deployed subject to detailed investigation at the application level.
ScottishPower Renewables	The HRA should also signpost the change control pathway. Any technology or configuration change that materially alters environmental pathways, including HVAC phasing that increases cable numbers, trenches and landfalls relative to HVDC assumptions, should be screened promptly through the Impact Assessment process and taken through proportionate HRA refresh where necessary.	This is already included in the conclusions section of the HRA but further clarification to conclusion about down-the-line changes into the HRA has been added.
ScottishPower Renewables	SPR agrees with and strongly welcomes the impact assessment conclusions that the HND recommendations for MarramWind and MachairWind are not predicted to result in adverse effects on the integrity of European sites, subject to project level HRA at consent stage.	Noted. No action needed.
ScottishPower Renewables	We welcome Stage 2 refinements that introduce appropriate buffers to highly protected areas. The two kilometre buffer to the Northeast of Farnes Deep Highly Protected Marine Area is a helpful precedent that shows how strategic assessment can de risk route design.	Noted. No action needed.
ScottishPower Renewables	The Marine Conservation Zone assessment should cross refer to the Impact Assessment process. Where corridor or technology changes could increase seabed interaction or alter the density of infrastructure crossings, these should be screened, and any additional assessment should be signposted clearly. We also request explicit consideration and transparent reporting of any interaction with Scottish Marine Protected Areas, including the Southern Trench MPA	Noted. The MCZ assessment has been updated to in the legislation section to refer to the Environmental Impact Assessment process and to clarify that any material corridor or technology changes will be subject to further screening and, where necessary, additional MCZ assessment. Scottish Marine Protected Areas (including the Southern Trench MPA, where relevant) have been assessed at Plan level. Any confirmed interaction will be subject to project-level MCZ assessment, with clear application of the mitigation hierarchy, including avoidance and micro-siting where feasible.



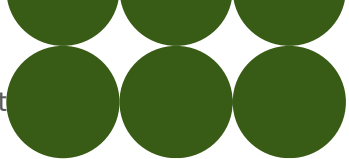
Respondent	Comment	Response or Action
	where relevant, with clear direction on feasible avoidance and micro siting	
ScottishPower Renewables	Due to character limit on this MS Online Form please refer to SPR's full response submitted to NESO's consultation mailbox for our comments regarding the Marine Conservation Zone Assessment.	Noted. No action needed.
ScottishPower Renewables	Use of MS online forms with character limits (especially as the limit is not stated) is inappropriate for public consultations as it prevents fully informed and detailed responses from being provided. Given the importance of the issues raised in this consultation SPR has submitted our full response to NESO's consultation mailbox.	Noted. To be considered in future consultations.
Offshore Wind Developer	We welcome the publication of the Holistic Network Design (HND) Implementation Plan and the associated suite of plan-level environmental assessments.	Noted. No action needed.
Offshore Wind Developer	As part of the HND and related follow-up work, a range of potential grid connection locations and options were considered by NGESE, balancing cost, technical, environmental and community factors, and informed by an understanding of available grid capacity.	Noted. No action needed.
Offshore Wind Developer	We support this recommendation and accept our project grid connection offer and have entered into the connection agreement. We have worked collaboratively to develop and submit a DCO application for a coordinated transmission solution, including aligned offshore and onshore export cable corridors and connection to the National Grid. This reflects the objectives of both the HND and the National	Noted. No action needed.



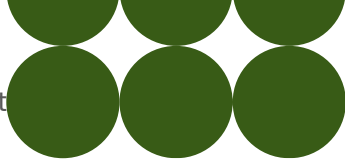
Respondent	Comment	Response or Action
	Policy Statements to promote coordination and avoid unnecessary duplication of infrastructure.	
Offshore Wind Developer	The accompanying Strategic Environmental Assessment, plan-level Habitats Regulations Assessment and Marine Conservation Zone assessments show that environmental considerations have been addressed at an appropriate strategic level.	Noted. No action needed.
Offshore Wind Developer	The proposals applied for in the DCO application deliver the co-ordination objectives of the National Policy Statements, the OTNR, and the recommendations of the HND, and are supported by the detailed project-level EIA and HRA carried out over several years.	Noted. No action needed.
Offshore Wind Developer	Given the maturity and breadth of the work already undertaken, we question the specific purpose and added value of plan-level assessment at this stage, particularly where the Implementation Plan is intended to formalise and document conclusions that have already been robustly derived. However, given the broad alignment of the environmental assessment work to date, we consider that this further plan-level assessment further corroborates and supports its conclusions and DCO proposals, and the recommendations of the HND.	Noted. No action needed.
Offshore Wind Developer	We encourage NESO to adopt a final Implementation Plan which clearly affirms the robustness of the existing HND outcomes and provides clarity on how any future updates would be managed (recognising the timescales and framework of the grid connection and DCO processes through which the outcomes are being delivered) and	Noted. No action needed.



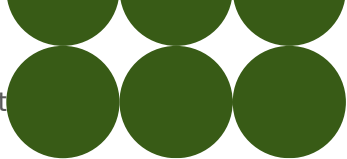
Respondent	Comment	Response or Action
	supporting the timely and coordinated delivery of offshore transmission infrastructure.	
Offshore Wind Developer	The Strategic Environmental Assessment, Habitats Regulations Assessment and Marine Conservation Zone assessments published alongside the HND Implementation Plan consider relevant impact pathways, reasonable alternatives, cumulative and in-combination effects, and applicable mitigation and monitoring principles.	Noted. No action needed.
Offshore Wind Developer	The conclusions reached broadly align with the outcomes of the environmental work carried out at the time of preparing the HND and the detailed project-level EIA and HRA, demonstrating consistency between plan-level and project-level assessment. In doing so, they appear to fulfil the intended purpose of plan-level assessment (i.e. to provide early, strategic assurance and direction). In this context, it is not immediately clear what additional insight or refinement is anticipated through further consultation on assessments that are already well developed at the project level. However, these plan-level assessments align with, and so support, the more detailed project level assessments which have subsequently been carried out as part of the project DCO process.	Noted. No action needed.
Ocean Winds	Arven is a 2.3 GW floating offshore wind development located to the east of the Shetland Islands spanning two phases: Arven South, a 500 MW project, and Arven, an 1800 MW development. The projects are located in the NE1 area, with Arven South to the south of the main site.	Your response is noted. However, at the scoping report stage of the Arven and Arven South projects, there was no concrete information regarding the location of the interface point, or a developer's choice of route. Our strategic assessment demonstrates that it is possible, at a high level, to recommend a route which minimises interaction with particular



Respondent	Comment	Response or Action
	The project is jointly owned by Ocean Winds and Mainstream Renewable Power, with Ocean Winds leading the current development phase. Arven is expected to be operational in the mid-2030s. Its output has the potential to provide two million households with clean renewable power, while saving three million tonnes of CO2 emissions each year. The HND Implementation Plan and its associated environmental documents have been developed retrospectively, using a fixed baseline from August 2024. The assumptions within the Plan's assessment relating to the Arven and Arven South offshore export cable corridors and landfall locations are inconsistent with current project assumptions. These current assumptions were most recently communicated by the project to NESO in August 2025 and are also set out, at a high level, in the Arven Offshore EIA Scoping Report published in May 2024, which predates the fixing of the Plan baseline in August 2024 (https://marine.gov.scot/?q=data/scoping-report-scop-0048-arven-offshore-wind-farm). The divergence between Plan-level and project-level assumptions has material implications for the environmental assessments. While the Plan FAQ document appropriately notes that "some outcomes detailed in our reports may not align with the decisions made at the project level," we consider that publicly available information at the time the baseline was fixed has not been adequately reflected in the Plan or its	environmental sites, and is based on the information we were provided by the TO. Objectively, given the information we had and our level of assessment, the study area identified is the most suitable. This also aligns with the following Arven scoping report citation: "It is intended to replicate this public exhibition/consultation event to cover onshore elements of the Project, later, once onshore locations have been better informed by NGESO's HND FUE (which is expected to have established outcomes through 2024)"



Respondent	Comment	Response or Action
	supporting assessments. As a result, the Plan cannot be regarded as having been robustly assessed.	
Ocean Winds	The environmental assessments supporting the Implementation Plan assume that any Arven or Arven South offshore export cable corridor will not pass through Pobie Bank SAC. The assumed routing also constrains export cable landfall options on the Shetland mainland, excluding more northerly landfalls (e.g. See Figure 2 in https://www.neso.energy/document/371066/download).	We have been in discussions previously regarding the Shetland projects. It's too early for us to do this. For logistical reasons, we needed to fix the scope of the report to a baseline, and this was determined to be August 2024. There are other changes we are aware of, including the results of three published impact assessments and the ongoing collaborative impact assessment. As well as the time required to undertake these additional assessments, the cumulative impact(s) would also need to be considered, the results of which are woven through nine reports all of which are subject to external feedback from the environmental experts and statutory bodies via the Environmental Subgroup, and internal governance. We appreciate that the project is progressing based on a change of grid connection, to that used in the HNDfUE. However, this has not been finalised, and SSEN-T have not yet consulted on their Shetland Island strategy. It would be premature for us to include an assumed location in our assessments and could potentially undermine SSEN-T's consultation. It is our intention to include significant changes, including the location of Arven's grid connection, in future updates, when there is more certainty around the location of infrastructure. We have referenced potential changes and their interaction with European Sites in the updates section "... are currently being explored, and are, at the time of writing, in their infancy. At this stage, it is not known if impacts on cable routes – and by extension, their impact on European Sites – will occur".



Respondent	Comment	Response or Action
Ocean Winds	These assessment assumptions are inconsistent with current Arven and Arven South project assumptions. The project is explicitly retaining optionality to route offshore export cables through Pobie Bank SAC, as this provides the shortest feasible route to landfall. In addition, Arven and Arven South continue to explore a range of export cable landfall options on the Shetland mainland that extend beyond the assumed NESO corridors.	We have been in discussions previously regarding the Shetland projects. It's too early for us to do this. For logistical reasons, we needed to fix the scope of the report to a baseline, and this was determined to be August 2024. There are other changes we are aware of, including the results of three published impact assessments and the ongoing collaborative impact assessment. As well as the time required to undertake these additional assessments, the cumulative impact(s) would also need to be considered, the results of which are woven through nine reports all of which are subject to external feedback from the environmental experts and statutory bodies via the Environmental Subgroup, and internal governance.
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Ocean Winds	Offshore EIA Scoping and Offshore HRA Screening Reports were submitted by the project in May 2024, and a Scoping	We have been in discussions previously regarding the Shetland projects. It's too early for us to do this. For logistical reasons, we needed to fix the



Respondent	Comment	Response or Action
	Opinion has subsequently been received from MD-Lot. Within the Offshore EIA Scoping Report, an Area of Search for offshore export cable corridor(s) was defined, based on routing to the Shetland mainland. The project is currently refining an offshore export cable corridor within this Area of Search, informed by emerging grid connection information, constraints analysis, and ongoing stakeholder engagement. Throughout this process, the project has repeatedly advised NESO of its intention to retain optionality for routing offshore export cables through Pobie Bank SAC, located immediately west of the Arven lease area boundaries. This intention is clearly set out in the published Offshore EIA Scoping Report, which also presents indicative offshore export cable design parameters.	scope of the report to a baseline, and this was determined to be August 2024. There are other changes we are aware of, including the results of three published impact assessments and the ongoing collaborative impact assessment. As well as the time required to undertake these additional assessments, the cumulative impact(s) would also need to be considered, the results of which are woven through nine reports all of which are subject to external feedback from the environmental experts and statutory bodies via the Environmental Subgroup, and internal governance. We appreciate that the project is progressing based on a change of grid connection, to that used in the HND FUE. However, this has not been finalised, and SSEN-T have not yet consulted on their Shetland Island strategy. It would be premature for us to include an assumed location in our assessments and could potentially undermine SSEN-T's consultation. It is our intention to include significant changes, including the location of Arven's grid connection, in future updates, when there is more certainty around the location of infrastructure. We have referenced potential changes and their interaction with European Sites in the updates section "... are currently being explored, and are, at the time of writing, in their infancy. At this stage, it is not known if impacts on cable routes – and by extension, their impact on European Sites – will occur".
Ocean Winds	The NESO Habitat Regulations Assessment Report does not identify the potential for direct physical impacts on Pobie Bank SAC. On this basis, we consider that the HRA screening conclusions are not supported by the evidence base and	The assessment does not consider traversing Pobie Bank SAC because it assesses the HND Implementation Plan study corridors and these do not traverse the SAC. It is, however, open to a developer to decide to deviate from those corridors, and justify that deviation, at the DCO level.



Respondent	Comment	Response or Action
	that the assessment is incomplete. We request that the potential for direct interaction with Pobie Bank SAC is explicitly considered within the HRA, with conclusions reached on the basis of a realistic worst-case scenario.	
Ocean Winds	The NESO 'Habitat Regulations Assessment Report' is based on a single assumed export cable landfall location. The mapped location is considered unlikely to reflect Arven and Arven South landfall location(s), which will be to some extent determined by the location of the project onshore grid connection point. Public consultation materials presented by SSEN-T indicate a likely connection point in northern mainland Shetland (see https://www.ssen-transmission.co.uk/projects/shetland-strategy/). We therefore consider that the HRA does not adequately assess the potential for likely significant effects on inshore European sites at landfall. We request that the assessment of potential interactions with inshore designated sites considers a wider stretch of coastline at landfall, including the northern mainland Shetland coastline.	The assessment does not consider traversing Pobie Bank SAC because it assesses the HND Implementation Plan study corridors and these do not traverse the SAC. It is, however, open to a developer to decide to deviate from those corridors, and justify that deviation, at the DCO level.
Kent Wildlife Trust	Kent Wildlife Trust wish to submit an objection to the HND Implementation Plan as currently published in draft. KWT contend the conclusions of the HRA report with regards to SW_E2a_2_to_Near Richborough. We disagree with the conclusion that with mitigation that there is a low likelihood of Adverse Effects on Site Integrity to the Thanet Coast and Sandwich Bay SPA/Ramsar with regards to temporary or permanent loss or removal of	It is understood that the marine licence for Nemo Link permitted both open cut and HDD and National Grid Ventures proceeded with open cut without first attempting HDD. Therefore both options were considered to be viable options of mitigation.



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	terrestrial habitats. This assessment is based entirely on the assumption that HDD would be used. Evidence from a previous cable in this location, Nemo Link, originally committed to delivery using HDD, however subsequently used open-cut trenching due to issues with ground conditions. In monitoring reports submitted to the MMO as part of the Marine Licence, it was concluded that open-cut trenching had resulted in irreversible damage to and loss of saltmarsh habitat.	
Kent Wildlife Trust	As an organisation that was not consulted with through the HND and HNDFUE processes, there is a significant lack of clarity on how the final design has been reached. Given our remit, these comments will focus on cables recommended for Kent.	The Wildlife Trust was part of the development of HND and subsequent design exercises. Due to the extent of the strategic design it was not possible to include regional stakeholder to that level.
Kent Wildlife Trust	Firstly, it is not clear why, in the HNDFUE process, cables which have not yet been granted a Development Consent Order have been listed as part of the existing network. This applies to the Sea Link cable, which is marked on Figure 6, spanning from Suffolk to Kent. The inclusion of such cable routes as part of the existing network within the HNDFUE implies assumed consent. On the basis that this process is designed to provide a strategic plan for transmission infrastructure across the country, the strategy should correctly identify the current status of cable routes.	Updates to the HND Implementation Plan have been made to Figure 6 and 11 to clarify what is and is not existing infrastructure.
Kent Wildlife Trust	Secondly, it is not clear why, despite the inclusion of the above-mentioned Sea Link cable in the HNDFUE process, illustrated in Figure 6, this cable is not included in Figure 11 as part of the proposed HND Implementation Plan design. The	Updates to the HND Implementation Plan have been made to Figure 11 to remove Sea Link and other interconnectors not baselined



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	omission of the Sea Link cable results in a clear underrepresentation of cables recommended to come onshore near Richborough, which has knock-on impacts on the suitability of the impact assessments (see below).	
Kent Wildlife Trust	The location of cables coming onshore near Richborough is reasonably assumed to be at Pegwell Bay, which is a highly sensitive site designated at the national and international level for its wildlife value. The sensitivity of this site is available in the public record, through records of the irreversible damage caused by the Nemo Link cable and is currently being examined for the Sea Link cable.	It is understood that the marine licence for Nemo Link permitted both open cut and HDD and National Grid Ventures proceeded with open cut without first attempting HDD. Consideration of the mitigation hierarchy, with particular focus on avoidance of designated sites as far as practical, was paramount in the development of the Plan. Through our strategic environmental assessments, avoidance of key constraints where practical was a significant factor in determining reasonable study corridors. An overview of the HND/HNDFUE appraisal process and the Constraint BRAG Ratings are detailed within Appendix A of the HND Implementation Plan. The aim of the Plan and environmental assessments is to guide future developments and mitigation through strategic oversight. Developers will also be required to implement relevant measures through their own environmental assessments.
Kent Wildlife Trust	The HND Implementation Plan has failed to consider the mitigation hierarchy by seeking to avoid landfall options which will impact on statutory designated sites. In our view, it is insufficient to claim that, due to the high-level nature of this Plan, at this stage the landfall is unknown. Through this Plan, the internationally important habitats at Pegwell Bay are being earmarked as a 'zone of sacrifice', rather than employing the mitigation hierarchy and seeking alternative landfall options which minimise environmental harm. It is clear that, at this stage, economic and operational	Consideration of the mitigation hierarchy, with particular focus on avoidance of designated sites as far as practical, was paramount in the development of the Plan. Through our strategic environmental assessments, avoidance of key constraints where practical was a significant factor in determining reasonable study corridors. An overview of the HND/HNDFUE appraisal process and the Constraint BRAG Ratings are detailed within Appendix A of the HND Implementation Plan. The aim of the Plan and environmental assessments is to guide future developments and mitigation through strategic oversight. Developers will also be required to



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	objectives have been prioritised when considering recommendations on routing in Kent.	implement relevant measures through their own environmental assessments.
Kent Wildlife Trust	Further, the claim that HDD will be used at this location is again being used to justify the Sea Link cable. It should, however, be noted that: a) HDD is only proposed for beneath saltmarsh habitat, with open-cut trenching proposed for mudflat habitat (which is also a designated feature of the SPA); b) ground condition surveys remain incomplete, and it is not yet known if HDD will be possible beneath the saltmarsh.	A professional judgment is made in the HRA and MCZ regarding the extent to which HDD may be feasible and to which intertidal mudflats are likely to recover from any open trenching, wherever around the coast that may be undertaken. The risks associated with HDD are discussed in the section of the AA on 'Temporary or permanent loss or removal of terrestrial and intertidal habitats' and it is for this reason that (following discussion with Natural England and the other SNCBs) options where HDD is a possibility were coded amber (meaning a mitigation method theoretically exists but requires further exploration at the project level) rather than green. Coding HDD red would be to assume that HDD does not work/cannot be delivered without an adverse effect on the integrity of European sites, which is considered inappropriate.
Kent Wildlife Trust	The evidence and examples from Nemo Link and Sea Link demonstrate that it is not appropriate to scope out impacts to the SPA and Ramsar based on the assumed use of HDD. On the basis of the above, it is clear that there is likely to be an adverse effect on site integrity of Thanet Coast and Sandwich Bay SPA/Ramsar from the proposed routing.	As above impacts have not been scoped out. While HDD has been identified as a potential solution to conclude no adverse effects on integrity the impact has been coded amber (meaning a mitigation method theoretically exists but requires further exploration at the project level) rather than green.
	Further to the above, the omission of the Sea Link cable from the draft HND Implementation Plan, illustrated in Figure 11, suggests a failure to consider the in-combination impacts of the Sea Link cable and SW_E2a_2_to_Near Richborough. Please note that, given the late stage at which KWT have become aware of this process and consultation, it has not	The Sea Link project is explicitly identified in the 'in combination' assessment of the HRA



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	been possible to review the impact assessments in their entirety. The above is therefore unlikely to cover all issues of concern to KWT.	
Kent Wildlife Trust	It is our view that Test 1 – Consider alternative solutions cannot be considered to be met with regards to proposed routing in Kent. The plan-making authority should consider whether the proposal could: • be delivered at a different location • use different routes across a site • change its scale, size, design, method or timing. Consideration of alternative solutions is required at both the strategic planning and project level, with alternative solutions at the strategic planning level considered in relation to the objective of connecting the consented or proposed offshore windfarms with onshore substations or converter stations, and thus with the onshore electricity supply network.	Alternatives assessment is only required within the context of HRA if it has not been possible to conclude adverse effects on integrity can be addressed. While we recognise uncertainties around HDD at a project level that require investigation for any DCO, HDD is a potential technique to address adverse effects on integrity and we note the applicant for Sea Link has undertaken technical studies including detailed geotechnical investigations which they consider identifies that HDD is a feasible solution.
Kent Wildlife Trust	It is our view that, given the likely adverse effects on site integrity of Thanet Coast and Sandwich Bay SPA/Ramsar, SW_E2a_2_to_Near Richborough should be subject to consideration of alternatives within the Habitats Regulations Derogations Report.	Alternatives assessment is only legally required within the context of HRA if it has not been possible to conclude adverse effects on integrity can be addressed. While we recognise uncertainties around HDD at a project level that require investigation for any DCO, HDD is a potential technique to address adverse effects on integrity and we note the applicant for Sea Link has undertaken technical studies including detailed geotechnical investigations which they consider identifies that HDD is a feasible solution.
Kent Wildlife Trust	Due to known ecological risks at Pegwell Bay, and previous and demonstrated irreversible damage caused by the Nemo Link cable (which failed to use HDD) to internationally	It should be noted that landfalls within the HND Implementation Plan are not binding on further stages of project development. Alternatives assessment is only legally required within the context of HRA if it has not



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	designated saltmarsh habitat, there is a clear need to consider alternative landfall options in Kent, beyond 'near Richborough'.	been possible to conclude adverse effects on integrity can be addressed. While we recognise uncertainties around HDD at a project level that require investigation for any DCO, HDD is a potential technique to address adverse effects on integrity and we note the applicant for Sea Link has undertaken technical studies including detailed geotechnical investigations which they consider identifies that HDD is a feasible solution.
Kent Wildlife Trust	The process of developing the HND and HNDFUE, which have ultimately fed into the HND Implementation Plan, has not been transparent. Nor has the process sought to engage all relevant stakeholders, with our understanding being that all consultation events have been undertaken behind closed doors as confidential meetings. It is understood that the national Wildlife Trust team were consulted on certain, specific aspects of the process, which did not extend to proposed route selection across the entire implementation plan. Consultation should have been open and transparent, with efforts made by NESO to engage with relevant stakeholders across the Plan area. Instead, we are now in a situation where KWT's first opportunity to comment on the Plan is at a late stage of the process, where we feel that there is no or limited opportunity for influencing route design. The assertion that the final HND is expected to be adopted in summer 2026 indicates that NESO are not anticipating any significant changes to the HND Implementation Plan, and undermines confidence that consultee comments and concerns will be considered in full. Moving forwards, NESO should seek to engage local stakeholders who have an acute local understanding of	The strategic nature of the HND/HNDFUE recommendations did not allow for region by region stakeholder engagement. Key statutory stakeholders were included throughout the evolution of HND HNDFUE design evolution, and through SEA Public consultation we are able to share these and engage regionally. We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.



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	impacts, to ensure that equal weight is given to environmental impacts across the Plan area, and not purely restricted to those areas which have been subject to detailed consultation.	
Thistle Wind Partners (Ayre & Bodum)	TWP as part of the Peterhead Developers Forum was pleased to meet with representative of NESO's predecessor organisation, National Grid ESO, in Summer 2024 to discuss the need for strategic level environmental assessments to support the connections recommendations made through the HND and HNDFUE processes. The absence of strategic level assessments at the time of making the recommendations, instead relying on non-statutory relative impact appraisals, means there remains a need to confirm the general principle and to demonstrate the environmental acceptability of relevant offshore wind grid connections and associated infrastructure, including in relation to potential cumulative impacts.	Noted. No action needed.
Thistle Wind Partners (Ayre & Bodum)	TWP strongly welcomes the publication of the Draft HND Implementation Plan and associated strategic level environmental assessments to support the HND, HNDFUE and HNDINTOG recommendations and some of the further engagement that TWP enjoyed prior to publication. The HND Implementation Plan environmental assessments need to: 1. Demonstrate the likely scale and resulting acceptability and consent ability of all relevant infrastructure, crucially including the acceptability of likely cumulative impacts where NESO have directed multiple projects to connect to the National Electricity Transmission System in close	HND Implementation Plan has been expanded show that while the Plan aiming to guide the developments and mitigation, developers are required to implement relevant measures through their own environmental assessments: "The key findings from the SEA, HRA and MCZ assessments are outlined below, however across all the environmental assessments, successful delivery of the Plan, whilst minimising the environmental effects, is dependent on effective project level planning, coordination, and timing." Spatial consideration of preferred cable routes in the Plan and other projects has been further considered and expanded in Section 9.2.1



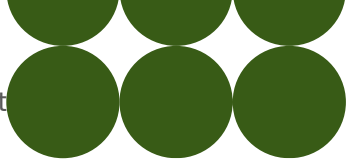
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	proximity or using shared connection points, we cannot overstate the importance of considering those impacts alongside the transmission infrastructure triggered by the HND/HNDFUE process.	Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure of the SEA Environmental Report.
Thistle Wind Partners (Ayre & Bodum)	2. Identify plan-level / strategic mitigation measures, which can then filter down to project-level measures, as outcomes from both the individual and cumulative impact assessments. To create a baseline for developers and Transmission Owners alike to work towards.	HND Implementation Plan has been expanded show that while the Plan aiming to guide the developments and mitigation, developers are required to implement relevant measures through their own environmental assessments: "The key findings from the SEA, HRA and MCZ assessments are outlined below, however across all the environmental assessments, successful delivery of the Plan, whilst minimising the environmental effects, is dependent on effective project level planning, coordination, and timing."
Thistle Wind Partners (Ayre & Bodum)	We welcome the proposed iterative approach to the HND strategic level environmental assessments. However, the 'Revision Schedule' section of the HND Implementation Plan does not explain how formal reviews of these assessments will dovetail with the project-level environmental assessments (e.g. EIA) which will be completed as each connection recommendation is implemented through consenting and development. It will be important for the HND to underpin and support project level consenting without generating inconsistencies or uncertainties. Prior to the publication TWP noted several discrepancies, in the information which we appreciate have now been rectified, but query how NESO propose to continue to update information as projects progress.	The HND Implementation Plan section "HND Implementation Plan Iteration Schedule" has been expanded to cover more detail on the monitoring phases and the expectations around how individual HND/HNDFUE project updates, as well and Impact Assessment changes, will be captured in future iterations.



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Thistle Wind Partners (Ayre & Bodum)	TWP appreciates the extensive data analysis and related work undertaken by NESO to prepare the individual assessments for each HND, HND FUE and HND INTOG connection recommendation (other phases of the HND programme are not relevant to Peterhead). We are however concerned at the absence of full spatially based cumulative impact assessments within the main body of the Strategic Environmental Assessment (SEA) Environmental Report (ER), as this needs to provide clear conclusions regarding the scale and acceptability of likely cumulative impacts from multiple connections recommendations located in the same area.	Spatial consideration of preferred cable routes in the Plan and other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure in the SEA ER.
Thistle Wind Partners (Ayre & Bodum)	The cumulative assessment presented in section 9.2 of the SEA ER presents only a high-level and generalised qualitative narrative of potential effects on environmental aspects at national level, with no reporting in the main body of the SEA ER to confirm the presence or absence of any likely significant cumulative environmental effects in areas where multiple HND, HND FUE and HND INTOG recommendations are located (referred to as 'Interface Areas'). We acknowledge that spatially defined cumulative assessments of such Interface Areas are provided in Appendix F of the SEA ER, However, the conclusions of these assessments do not appear to have been brought through to the main body of the SEA ER.	Spatial consideration of preferred cable routes and interface areas in the Plan and other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure in the SEA ER. The description of onshore interface areas in Section 9.2.1.2 has been expanded and includes a recommendation for coordination in these areas.
Thistle Wind Partners	We would recommend that further work should be undertaken to present a more comprehensive and spatially based cumulative assessment in the main body of the SEA ER. Alongside some of the preferred options that we as	Spatial consideration of preferred cable routes and interface areas in the Plan and other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned



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(Ayre & Bodum)	developers appreciate that NESO investigated as part of the assessment. This is needed at plan level to demonstrate the locational suitability, environmental and community acceptability of connection recommendations in order to support smooth and efficient consenting at project level.	infrastructure in the SEA ER. The description of onshore interface areas in Section 9.2.1.2 has been expanded and includes a recommendation for coordination in these areas.
Peterhead Developers Forum	The Peterhead Developers Forum (PDF) is pleased to respond to NESO's consultation on the Draft Holistic Network Design (HND) Implementation Plan and associated suite of environmental assessments. Please note this response only relates to project interactions and potential cumulative impacts from multiple projects within the vicinity of Peterhead; it does not consider the treatment or assessment of individual projects as this is a matter for individual PDF member projects to consider and respond to as required.	Noted. No action needed.
Peterhead Developers Forum	The PDF was established in 2023 to bring together 15 major energy projects, including multiple offshore wind grid connections and electricity transmission projects, planned by a range of infrastructure providers within the vicinity of Peterhead. This includes 8 offshore wind projects which are planned to connect to the National Electricity Transmission System within the vicinity of Peterhead as well as directly related electricity transmission projects, all of which respond to recommendations made through NESO's HND process.	Noted. No action needed.
Peterhead Developers Forum	The aims of the PDF are to share understanding between energy infrastructure projects with planned or potential landfalls and other infrastructure components within the Peterhead area, and to consider the possibility of collaborating in relevant areas. To this end, the PDF has	Noted. No action needed.



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	established a spatial co-ordination sub-group to help address spatial challenges and opportunities associated with delivering the major energy infrastructure projects within the vicinity of Peterhead.	
Peterhead Developers Forum	The PDF was pleased to meet with representative of NESO's predecessor organisation, National Grid ESO, in Summer 2024 to discuss the need for strategic level environmental assessments to support the connections recommendations made through the HND and HNDFUE processes. The absence of strategic level assessments at the time of making the recommendations, instead relying on non-statutory relative impact appraisals, means there remains a need to confirm the general principle and to demonstrate the environmental acceptability of relevant offshore wind grid connections and associated infrastructure, including in relation to potential cumulative impacts.	Noted. No action needed.
Peterhead Developers Forum	Notwithstanding some concerns noted below regarding specific aspects of the reporting, the PDF therefore strongly welcomes the publication of the Draft HND Implementation Plan and associated strategic level environmental assessments to support the HND recommendations.	Noted. No action needed.
Peterhead Developers Forum	The HND Implementation Plan environmental assessments need to: 1. Demonstrate the likely scale and resulting acceptability & consentability of all relevant infrastructure, crucially including the acceptability of likely cumulative impacts where NESO have directed multiple projects to connect to	HND Implementation Plan has been expanded show that while the Plan aiming to guide the developments and mitigation, developers are required to implement relevant measures through their own environmental assessments. Spatial consideration of preferred cable routes in the Plan and other projects has been further considered and expanded in Section 9.2.1



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	the National Electricity Transmission System in close proximity or using shared connection points.	Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure of the SEA Environmental Report. Clarification added to the HND Implementation Plan: The key findings from the SEA, HRA and MCZ assessments are outlined below, however across all the environmental assessments, successful delivery of the Plan, whilst minimising the environmental effects, is dependent on effective project level planning, coordination, and timing.
Peterhead Developers Forum	Identify plan-level / strategic mitigation measures, which can then filter down to project-level measures, as outcomes from both the individual and cumulative impact assessments.	HND Implementation Plan has been expanded show that while the Plan aiming to guide the developments and mitigation, developers are required to implement relevant measures through their own environmental assessments.
Peterhead Developers Forum	It is vital that all issues raised through this consultation are fully addressed to ensure that the final HND Implementation Plan and associated environmental assessments are fully robust.	NESO and our consultants have a thorough post consultation process where all responses are reviewed and updates/clarifications are made to the Plan and assessments as required. Common themes identified and a thorough 'Feedback Response Document' is produced to be shared with respondents. We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Peterhead Developers Forum	The PDF recommends that the conclusions of the spatially defined cumulative impact assessments undertaken by NESO are presented clearly within the main bodies of both the Implementation Plan itself and the Strategic	The cumulative assessment has been expanded in Section 9.2 of the SEA ER. Clarification added to the HND Implementation Plan:



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	Environmental Assessment (SEA) Environmental Report, with short summaries for each relevant interface area. This is needed to clearly confirm to developers, stakeholders and relevant communities whether the HND recommendations are likely to generate significant environmental effects. The summary information should include the cumulative impact assessment conclusions for those locations where multiple recommendations converge or share connection points, including within the vicinity of Peterhead. This would help to demonstrate the scale and acceptability of cumulative effects and supports efficient consenting in all clustered areas across Great Britain.	The key findings from the SEA, HRA and MCZ assessments are outlined below, however across all the environmental assessments, successful delivery of the Plan, whilst minimising the environmental effects, is dependent on effective project level planning, coordination, and timing.
Peterhead Developers Forum	The PDF welcomes the proposed iterative approach to the HND strategic level environmental assessments. However, the 'Revision Schedule' section of the HND Implementation Plan does not explain how formal reviews of these assessments will dovetail with the project-level environmental assessments (e.g. EIA) which will be completed as each connection recommendation is implemented through consenting and development. It will be important for the HND to underpin and support project level consenting without generating inconsistencies or uncertainties.	With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would result in the Plan being revised more frequently than the current three-year schedule.
Peterhead Developers Forum	The PDF supports the use of the HND Impact Assessment process and note its application to the Southern Cluster and Northern Cluster design changes. We recommend that NESO publishes a simple trigger matrix and confirms that triggers apply to all relevant parties, including transmission owners and interconnector sponsors as well as offshore wind	With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would



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	developers. Triggers should capture technology changes between HVDC and HVAC, relocation of interface points, corridor realignment, adjustments to multi terminal topology or bundling, and phasing that increases landfalls or materially scales the onshore footprint. The plan should also explain how completed Impact Assessments update the plan baseline and, where relevant, the strategic level environmental assessments.	results in the Plan being revised more frequently than the current three-year schedule.
Peterhead Developers Forum	The PDF appreciates the extensive data analysis and related work undertaken by NESO to prepare the individual assessments for each HND connection recommendation (only the HND1, HND-FUE and HND-INTOG phases are relevant to the project members of the PDF). We are however concerned at the absence of full spatially based cumulative impact assessments within the main body of the Strategic Environmental Assessment (SEA) Environmental Report (ER), as this needs to provide clear conclusions regarding the scale and acceptability of likely cumulative impacts from multiple connections recommendations located in the same area.	With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would results in the Plan being revised more frequently than the current three-year schedule.
Peterhead Developers Forum	The cumulative assessment presented in section 9.2 of the SEA ER presents only a high-level and generalised qualitative narrative of potential effects on environmental aspects at national level, with no reporting in the main body of the SEA ER to confirm the presence or absence of any likely significant cumulative environmental effects in areas where multiple HND recommendations are located (referred to as 'Interface Areas'). We acknowledge that spatially defined cumulative assessments of such Interface Areas are	Spatial consideration of preferred cable routes and interface areas in the Plan and other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure in the SEA ER. The description of onshore interface areas in Section 9.2.1.2 has been expanded and includes a recommendation for coordination in these areas.



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	provided in Appendix F of the SEA ER, including in respect of the Peterhead area, and provide further comments on these below. However, the conclusions of these assessments do not appear to have been brought through to the main body of the SEA ER.	
Peterhead Developers Forum	The PDF therefore recommends that further work should be undertaken to present a more comprehensive and spatially based cumulative assessment in the main body of the SEA ER. This is needed at plan level to demonstrate the locational suitability, environmental and community acceptability of connection recommendations in order to support smooth and efficient consenting at project level.	Spatial consideration of preferred cable routes and interface areas in the Plan and other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure in the SEA ER. The description of onshore interface areas in Section 9.2.1.2 has been expanded and includes a recommendation for coordination in these areas.
Peterhead Developers Forum	The PDF welcomes the Interface Assessments (within SEA ER Appendix F) provided for the Peterhead area and, in respect of potential cumulative impacts, agrees with their conclusions. These assessments help to demonstrate the cumulative environmental acceptability of proposed grid connection infrastructure within the Peterhead area.	Noted. No action needed.
Peterhead Developers Forum	The PDF acknowledges the agricultural character of Peterhead's hinterland but notes the relatively limited land take required for linear cable routes and the range of land qualities found within the study area (i.e. it is not all prime agricultural land as implied within the Interface Assessments). All PDF projects are subject to detailed site optioneering and selection processes, taking account of existing land uses and following the mitigation hierarchy. On this basis we agree that the potential effect identified on geology, soils and land use does not constitute a likely	Noted. No action needed.



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	significant adverse effect under the SEA Regulations. The PDF considers that any potential impacts on agricultural land use can be appropriately mitigated and managed through project level siting, design and assessment. Only minor and not significant cumulative effects are predicted on other environmental topics, including landscape and visual amenity. In relation to potential effects within the vicinity of Longside, where multiple PDF projects converge, we welcome the clear assessment finding that "there is unlikely to be any significant negative effects on landscape and visual amenity within the study area".	
Peterhead Developers Forum	The PDF recognises that the consideration of (reasonable) alternatives is a fundamental element of SEA. Unfortunately, as drafted the assessment of alternatives in Section 7.1 of the SEA ER is relatively limited as it does not clearly consider whether different combinations of feasible spatial options to connect individual offshore wind farms (i.e. different cable corridors and/or connections points) would generate different likely significant effects. Further work and reporting would therefore be helpful to provide a more robust description of all identified reasonable alternatives (including those at option / corridor level), a more robust assessment of these reasonable alternatives and more robust justification for the selection of the connection recommendations against these in line with statutory requirements. Importantly, this should take account of interactions between potential connection options for different offshore wind farms and clearly demonstrate the	Section 7.1 of the SEA ER discusses the strategic alternatives, which is required under the SEA legislation. In addition, all routes were subject to NESO's equal footing appraisal and all short-listed designs also went through a light SEA appraisal, considering the potential for positive and negative environmental effects, as detailed in the Appendices



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	locational suitability and need for the ultimately selected suite HND connection recommendations.	
Peterhead Developers Forum	It should be noted that the SEA Regulations and associated caselaw limit the need to describe the selection of and assess alternatives to only those that are deemed "reasonable". This means that any options which were initially identified but then discounted on feasibility grounds (economic, environmental, technical or other) do not require to be considered further. The PDF recommends that NESO should adopt this approach when producing a revised assessment of reasonable alternatives to remain proportionate whilst complying with statutory requirements	Section 7.1 of the SEA ER discusses the strategic alternatives, which is required under the SEA legislation. In addition, all routes were subject to NESO's equal footing appraisal and all short-listed designs also went through a light SEA appraisal, considering the potential for positive and negative environmental effects, as detailed in the SEA Appendices.
Scottish Fishermen's Federation (SFF)	The SFF welcome the chance to comment on the draft Holistic Network Design Implementation Plan (HNDIP). Fishing is a sustainable, low carbon, and strategically important sector for Scotland's coastal economy, culture and food security. Any strategic offshore transmission plan must fully recognise cumulative and long term impacts on commercial fishing and the marine environment. While coordinated network planning is necessary to meet offshore wind ambitions, the current HNDIP raises serious concerns that require further work to ensure that the Plan is deliverable, environmentally responsible, and compatible with the continued viability of Scotland's fishing fleet.	Noted. No action needed.
Scottish Fishermen's Federation (SFF)	Impacts on Fisheries and Marine Users The Plan's references to "busy shipping and fishing areas" do not reflect the true scale of impacts. It fails to account for: • Economic value of affected fishing grounds;	A fisheries specific assessment integrating socio economic analysis, displacement modelling and operational risk assessment before finalisation – is not considered viable at this strategic Plan level given the holistic nature of the Plan with 5km study corridors for 'recommended'



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	- Operational constraints from extensive cable corridors; - Safety risks from gear snagging and displacement; - Cumulative impacts of sequential cabling, and landfill works. Thousands of kilometres of cabling will restrict access to productive grounds, where burial is infeasible and cable protection is needed. Long term displacement risks are not captured by the SEA, MCZ or HRA. SFF expects a fisheries specific assessment integrating socio economic analysis, displacement modelling and operational risk assessment before finalisation.	design. The SEA that NESO is carrying out on the HND/HNDFUE Plan is voluntary rather than mandated. We are carrying out this assessment due to the potential benefits that this assessment may provide to industry, community and environment, but it is not required under legislation and the Plan has no weight in planning law. We do not propose any further assessment of socio-economics through a Sustainability Appraisal as these recommendations do not fall under legislation relevant to Local Planning Authorities, local plans and spatial development strategies. However, there will be a requirement for project level assessment to be carried out at the detailed design stage.
Scottish Fishermen's Federation (SFF)	Early, Continuous and Co Designed Engagement Engagement to date has been too top down. Corridor selections and technical choices have progressed without meaningful fishing sector input. We request: - Early involvement in option development, - Transparent sharing of spatial data, constraint maps and modelling assumptions; - Co design of mitigation measures rather than retrofits; - Clear dispute resolution and adaptive planning mechanisms. The fishing industry must be treated as a strategic stakeholder, not consulted after decisions are made.	Noted. We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved. This will be considered in future consultations.
Scottish Fishermen's Federation (SFF)	Cumulative and Long Term Spatial Pressures Combined with ScotWind, INTOG, oil and gas, CCS proposals and MPAs, the HND represents an unprecedented reallocation of sea space. Current assessments treat routes individually and understate cumulative pressure. SFF call for:	Noted. Recommend acknowledgement of the cumulative effects of cables on commercial fisheries at the Plan stage and that this should be looked at in more detail at the project stage, including consideration of coordination and solutions.



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	• Strategic cumulative impact modelling including future offshore wind (in England) phases and grid upgrades; • Assessment of knock-on effects on fleet distribution, catch rates and port use; • Guarantees that displacement does not shift harm to other vulnerable fleets or regions. Without cross sectoral spatial strategy aligned to HND, uncoordinated industrialisation risks undermining Scotland's sustainable fishing industry.	The HND Implementation Plan updated to include the following: The cumulative effects of cables on commercial fisheries should be looked at in more detail at the project stage, including consideration of coordination and solutions., It is understood that better coordination of fishing data is emerging and may be useable across future plans produced or endorsed by NESO.
Scottish Fishermen's Federation (SFF)	Technical Uncertainty and Design Creep Non binding corridors and project level changes create uncertainty and consultation fatigue. SFF seeks commitments that developers cannot widen corridors or add landfalls beyond the strategic envelope without new consultation, full transparency on impact assessments and recognition that route shifts transfer impacts to new grounds.	NESO does not have the powers in their ToR to ensure that "developers cannot widen corridors or add landfalls beyond the strategic envelope without new consultation, full transparency on impact assessments and recognition that route shifts transfer impacts to new grounds". Our status in planning and limited authority to enforce mitigation is outlined within our HND Implementation Plan, Environmental Assessments, and also our HND Implementation Plan FAQ document issued alongside the suite of reports during the public consultation.
Scottish Fishermen's Federation (SFF)	Mitigation, Coexistence and Compensation Coexistence with cables is possible but the proposed density exceeds traditional mitigation. The Plan must include: • Avoidance of high value fishing grounds and spawning and nursery areas; • Mandatory burial to maximum practicable depth; prefer rock cover where burial is infeasible; avoid concrete mattresses and similar protections in open waters; • Standards for charting and post construction monitoring; • Transparent, industry endorsed compensation where harm is unavoidable, with avoidance as the priority.	Noted. The HND Implementation Plan, 'SEA Outcomes' section has been updated to include: The cumulative effects of cables on commercial fisheries should be looked at in more detail at the project stage, including consideration of coordination and solutions., It is understood that better coordination of fishing data is emerging and may be useable across future plans produced or endorsed by NESO.



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	SFF support transmission system but not at the expense of a sustainable, low carbon food industry and thousands of jobs. The HNDIP must be strengthened through deeper socio economic and operational fisheries assessment, improved spatial planning and cumulative evaluation, genuine co design with stakeholders, and stronger safeguards for fishing access, safety and the marine environment.	
Scottish Fishermen's Federation (SFF)	From the SFF perspective, the SEA, HRA and MCZ assessments do not fully recognise the risks posed to fishing grounds, critical spawning and nursery habitats, or the long term sustainability of commercial fisheries across UK waters.	Spawning and nursery grounds were considered and assessed as a sensitivity indicator for commercial fisheries (Material Assets) as well as biodiversity, flora and fauna in the SEA ER, however the data suitable for use at this strategic level classifies large areas as sensitive grounds, and project-level data should provide greater accuracy. The relative intensity of fishing activity was also considered and scored as a sensitivity indicator for commercial fisheries (Material Assets). The spatial assessment has been expanded in Section 9.2.1 Cumulative/in-combination effects in the SEA ER, and recommendations for coordination brought through to the mitigation in Section 10.1.
Scottish Fishermen's Federation (SFF)	Insufficient Protection for Fish & Shellfish Spawning and Nursery Grounds (Inc. Herring) The SEA identifies key ecological areas—spawning and nursery grounds for herring, sandeel, cod, Nephrops, scallops and others—but does not adequately assess how trenching, seabed preparation, sediment plumes or cable protection will affect these sensitive life stages. The HRA acknowledges habitat alteration but does not evaluate consequences for early life survival. This is especially concerning for herring, whose eggs require stable, coarse substrates and are highly vulnerable to	Table 28 of the SEA ER 'Potential high-level effects on SEA topics from offshore and onshore cabling' details the potential effects on fish and their key habitats as part of the Biodiversity, Flora and Fauna SEA topic to a detail that is considered most applicable at this strategic level. This includes potential effects from pre-construction, construction and cable protection and includes reference to key habitats such as spawning and nursery grounds. 'Potential for effects on key life stages, where spawning and nursery grounds are impacted.' has been added to expand this description.



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	sedimentation or seabed disturbance. ICES advises avoiding activities that could harm herring spawning grounds unless robust assessment proves otherwise, yet this principle is not reflected in the assessments or route planning. For SFF members across the North Sea, Minches, Clyde and west coast, inadequate protection threatens stock resilience and the viability of pelagic and mixed fisheries.	
Scottish Fishermen's Federation (SFF)	EMF Impacts from Subsea Power Cables Are Under Assessed The SEA and HRA note that subsea cables emit electromagnetic fields (EMF) affecting species within tens of metres, but they downplay the significance of these impacts. Species of concern include herring (which use magnetic cues), electroreceptive species such as skates, migratory species like salmonids and eels, and juvenile demersal fish in nursery areas. The assessments do not consider cumulative EMF exposure from multiple parallel cables, behavioural changes such as avoidance or disrupted migration, feeding pattern, or impacts on catchability, stock distribution and fishing operations. Given the scale of the proposed network—much of it in areas heavily fished by SFF members—EMF effects could materially alter stock availability and fleet behaviour, which is not meaningfully assessed.	Noted, EMF effects have been appropriately considered within the HRA and MCZ assessments, including sensitive receptors (e.g. elasmobranchs, migratory fish and benthic species), potential behavioural responses, and the influence of cable configuration. The assessment reflects the current evidence base, which indicates effects are highly localised and limited to small, short-term behavioural changes, with no evidence of population-level impacts. Cumulative and site-specific considerations will be addressed at the project level where sufficient design detail is available. Reference to elasmobranch sensitive species has been included within the high level impact effects in Table 28 of the SEA ER. Regarding offshore cabling the table notes that there is potential for adverse effects on fish stocks. The spatial assessment has been expanded in Section 9.2.1 Cumulative/in-combination effects in the SEA ER, and recommendations for coordination brought through to the mitigation in Section 10.1.
Scottish Fishermen's Federation (SFF)	Fishing Grounds Not Treated as Critical Environmental or Socio Economic Assets Fishing grounds underpin coastal economies and contribute to low carbon food security, but the assessments fail to reflect this. The SEA does not classify fishing grounds or spawning areas as “sensitive receptors”, long term	Spawning and nursery grounds were considered and scored as a sensitivity indicator for commercial fisheries (Material Assets) as well as biodiversity, flora and fauna in the SEA ER, however the data suitable for use at this strategic level classifies large areas as sensitive grounds, and project-level data should provide greater accuracy. The relative intensity of fishing activity was also considered and scored as a sensitivity indicator



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	displacement from traditional grounds due to unburied cables or cable protection is not quantified, and cumulative loss of fishing opportunity from cables, wind farms, MPAs and other developments is not assessed. Exclusion from key grounds has real economic and operational consequences for SFF members, yet these are inadequately captured.	for commercial fisheries (Material Assets). The spatial assessment has been expanded in Section 9.2.1 Cumulative/in-combination effects in the SEA ER, and recommendations for coordination brought through to the mitigation in Section 10.1.
Scottish Fishermen's Federation (SFF)	Over Reliance on Project Level Mitigation Instead of Strategic Avoidance Significant fisheries impacts are deferred to future project level assessments, which is unacceptable for an industry dependent on continued access to traditional grounds. Once large marine corridors are fixed at the plan level, avoidance becomes impossible and impacts become locked in. SFF stresses that avoidance—not mitigation—must guide protection of fishing grounds and sensitive ecological areas. Overall, the assessments do not sufficiently consider the combined effects of seabed disturbance, disruption of spawning and nursery habitats, EMF exposure and permanent exclusion from productive fishing grounds. SFF urges NESO and government to: • Apply ICES advice regarding herring spawning habitats • Recognise key fishing grounds and nursery areas as sensitive receptors requiring strategic avoidance • Conduct full cumulative impact assessments, including EMF, sedimentation and habitat alteration • Prioritise co designed routing with the fishing industry before corridor selection • Ensure offshore wind development does not displace	Cumulative effects of offshore infrastructure as the marine area gets busier are acknowledged. Strategic corridors are 5km wide, however the actual cable trenching footprint is only several metres. Spawning and nursery grounds were considered and assessed as an indicator for sensitivity for commercial fisheries (material assets) in the SEA, however data suitable for use at this strategic level covers very large areas. Key fishing grounds as well as spawning and nursery grounds should be further considered at the project level when further detail for specific areas is available.



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	impacts onto commercial fisheries through compensatory measures SFF emphasises that far stronger protections for fisheries are required before the HND Plan progresses.	
Historic England	Thank you for the opportunity to comment on the HNDIP and the accompanying environmental assessments. Historic England is the government's statutory adviser on all matters relating to the historic environment in England including the marine planning area. Our comments are therefore limited to the HNDIP and the SEA only.	Noted. No action needed.
Historic England	The overall purpose of the HNDIP to set out high-level strategic design recommendations for offshore grid connections (export cables, landfalls, onshore substations / converter stations) to connect large-scale offshore wind to the national grid, is to be welcomed. We note that onshore infrastructure does not fall fully within the HNDIP's current scope for detailed routing and will be subject to further detailed design. Onshore features are intrinsically linked to appropriate siting, routing and development of networks and therefore should be considered at the earliest opportunity and we would be pleased to advise further on this when necessary.	NESO have now commenced a series of workshops post this consultation on the environmental approach for CSNP and welcome further engagement with Historic England on the methodology development for networks.
Historic England	Given the scale of offshore cables, landfalls, onshore substations/converters required, there is a significant potential for interaction with heritage assets including intertidal archaeology, buried archaeology in onshore corridors, as well as built heritage and setting. We understand that the strategic corridors (for cables, landfall points, onshore cable corridors and onshore interface	Further clarification has been added to the HND Implementation Plan. The SEA has considered relevant available data for the historic environment at this strategic level as sensitivity indicators in the assessment and has recommended mitigation for the avoidance and mitigation of negative effects on cultural heritage at the project level.



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	substations/converters) and recommendations are indicative only, and that detailed project-level design and routing may deviate from those in the HNDIP. It is therefore important to ensure that consideration and assessment of the historic environment are fully incorporated. We are concerned that in its current format the HNDIP repeatedly focuses on natural environmental constraints and places less emphasis on heritage constraints.	
Historic England	For example, the HNDIP states that individual projects will undergo Environmental Impact Assessment (EIA) (Future Project Development and Consenting, pages 6-7) as necessary, and that each will consult the relevant nature / environment authorities. Page 38 (HND Implementation Plan Monitoring) also refers to consultation with statutory nature conservation bodies. Neither explicitly recognise heritage statutory consultees. We recommend greater emphasis on the requirement to consider the historic environment at all stages, i.e. at the strategic plan level and in references to project stages. Doing so would reinforce the need for early engagement, which is Historic England's preferred way of working. Ultimately this can result in speeding up development delivery and a reduction in costs.	Further clarification has been added to the HND Implementation Plan.
Historic England	It also enables early consideration and understanding of potential impacts on the historic environment and can identify where these can be avoided or minimised. The current emphasis on the natural environment fails to recognise or consider that the historic environment, as a	Further clarification has been added to the HND Implementation Plan.



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	finite resource, cannot be compensated for in ways the natural environment can.	
Historic England	Scoping heritage in at an early stage can also assist in the identification of opportunities for social benefits because of development. For example, investing in the development, preservation, and/or regeneration of existing heritage assets has the potential to offer multiple community wellbeing benefits, such as connection to place, strengthening feelings of identity and belonging and social connections. Heritage assets are not passive – they are unique symbols of local identity and vital centres of community activities and services, and they can offer a sustainable pathway to low-carbon solutions and community wellbeing through social prescribing, mental health support and placemaking. Without giving prominence to heritage in the HNDIP these opportunities could ultimately be missed.	Further clarification has been added to the HND Implementation Plan.
Historic England	It is important to ensure that a robust baseline of heritage constraints (onshore and offshore) is incorporated as the detailed routing and design proceeds. This includes the Marine Data Exchange Heritage Accelerator (MDEHA) project.	NESO has provided further text in the HND Implementation Plan regarding how the Plan is aiming to guide the developments and mitigation but that developers are required to implement relevant measures through their own environmental assessments. Note that the Marine Data Exchange Heritage Accelerator project has been referenced in the SEA mitigation for consideration at the project level.
Historic England	The HNDIP is a network-scale strategy rather than a single project so the cumulative impact of multiple cable landfalls, corridors, substations and converters on the historic environment will need to be carefully considered. The plan rightly identified areas e.g. East of England as hotspots of cumulative impacts. For the offshore historic environment,	Noted. The potential for cumulative effects, including on historic assets and the historic environment has been included in Section 9.2.1 of the SEA ER. The potential for a loss of access to features/areas has been added to this discussion.



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	cumulative impact could result in a loss of access to an area for archaeological study e.g. known prehistoric river systems under the North Sea which could be lost for up to 30-50 years due to placement of infrastructure, some of which may never be removed.	
Historic England	Onshore cumulative impacts are likely to have an impact on landscape, seascape and visual amenity including the impacts on the setting of designated and undesignated heritage assets.	The cumulative assessment has been expanded in Section 9.2 of the SEA ER. Further text included in the HND Implementation Plan to note the recommendations coming from the SEA, HRA and MCZ assessments – acknowledging the risk of cumulative effects on the environment and successful Plan delivery, with good planning and coordination, including timing, important for successful delivery whilst minimising environmental effects (including for cabling and substations / converter stations and offshore and onshore areas).
Historic England	Scoping of SEA Issues (Table 2) – we welcome that Cultural Heritage has been included in reference to how the historic environment is encountered either on land or in any sea area. We appreciate how the SEA is framed by different scheme stages e.g. construction, operation/maintenance and decommissioning. It is therefore directly relevant at all these stages that not only are actions taken to safeguard known heritage assets, but that there will always be the potential to damage or disturb as yet undiscovered heritage assets in the marine environment.	Noted, the following text has been added to Table 40 in the SEA ER: 'At the construction, operation/maintenance and decommissioning stages, actions should be taken to safeguard known heritage assets, and to consider and mitigate against the potential to damage or disturb as yet undiscovered heritage assets in the marine environment.'
Historic England	SEA objectives (Table 26) – It is apparent that the focus for the assessments presented is on negative effects and while we acknowledge the attention given to possibility of	Noted, the indicators and targets, respectively, for the Cultural Heritage SEOs have been updated as follows in the SEA ER: 'Potential to contribute to archaeological knowledge through surveys and actions.' and 'Potential for



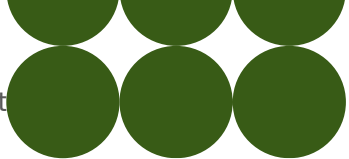
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	beneficial effects at the project level (e.g. increased sedimentation allowing for in-situ burial of heritage assets), more attention was warranted at a strategic level on positive effects. For example, the Offshore Energy SEA 3 (Environmental Report, 2016), includes the objective to contribute to archaeological knowledge. It is directly relevant to this plan level SEA exercise to reinforce the importance of scheme specific surveys and actions necessary to prevent loss of marine archaeological resources. It is also important to acknowledge how the UK Marine Policy Statement (MPS) and published English Marine Plans, recognise that the lack of designation for some heritage assets does not necessarily indicate a level of lower significance and the potential for heritage assets to be discovered. The statement made that "All new archaeological discoveries are reported in line with legislative requirements" is too simplistic and inadequate compared with the appropriate and proportionate attention given to all heritage assets and the importance of gaining new knowledge to inform subsequent decision-making. We encourage you to address this matter so that this assessment conforms to UK Government policy, as demonstrated through all Offshore Energy SEAs produced to date.	gaining new knowledge to inform subsequent decision-making.' This potential has also been recognised within the assessments for Cultural Heritage for HND, HND FUE Scotwind, Celtic Sea and INTOG.
Historic England	3.2.8 Cultural Heritage (page 209). The Key Issues described here would benefit from greater consideration of the historic environment, especially in relation to setting. For example (bolded text suggested for inclusion), • Potential for direct or indirect effects on marine, coastal	Noted. The suggested additions have been made and also included in Table 2 in the SEA ER.



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	and terrestrial designated and non-designated archaeological and architectural heritage and settings due to development altering decay or erosion processes. • Potential for direct or indirect effects on coastal designated and non-designated architectural heritage and settings during construction of new onshore infrastructure such as converter stations or offshore interventions. • Potential for direct or indirect effects on designated and non-designated archaeological and architectural features and their settings from the presence of new onshore or offshore infrastructure. • Potential for the discovery of new cultural heritage features during construction, and for recording and sharing learning from these sites/ features. • Potential for positive outcomes for conserving and enhancing the historic environment.	
Historic England	The Key Issues could also be updated to include other onshore and offshore heritage designations such as historic wrecks, submerged landscapes, scheduled monuments, and registered battlefields, for example. Section 8.1 Potential effects (page 268). Defines the main strategic potential effects by SEA chapter. For cultural heritage and for landscape seascapes and visual amenity, there is no reference made to settings, which may be relevant for both offshore and onshore interventions.	Noted. The suggested additions have been included in the SEA ER.
Historic England	Section 10.1.2 Mitigation by Environmental Effect (table 40) for the SEA topic “cultural heritage” under “offshore cabling” contains some inaccurate statements which could benefit from amendment. For example, these include	Note, potential for effects on the setting of assets has been added to this introductory text in the SEA ER. Note that setting for Cultural Heritage is referenced several times in Table 28 and Table 29 of the SEA ER for potential effects from offshore and onshore cabling and onshore



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	"Site surveys or trial trenching" which is never a mitigation option in the offshore area during the "project planning phase". Furthermore, trial trenching" is never considered a viable investigative measure in the offshore area as it cannot physically replicate trial trenching as is conducted terrestrially. "Relocation of the proposed activities" this does not happen during (EIA) project planning phase as all high-resolution survey and engineering design options are only ever decided post-consent. Geotechnical surveys cannot reveal the presence of "unknown wreck locations" unless the borehole or vibro-core physically hits a buried wreck – which would be a major and expense mistake. The part about Protection of Wrecks Act 1973 is equally alarming as no seabed disturbing activity as they are trying to describe here would ever be allowed by Secretary of State DCMS within the 1973 Act exclusion zone of a nationally important, designated historic shipwreck site. It is also very important to acknowledge that designated heritage assets (under with the 1973 or 1979 Acts) only exist within the English Inshore Marine Planning Area. Heritage Assets are found in the English Offshore Marine Planning Area (i.e. beyond 12 nm miles of the English sector of the UK Territorial Sea) but cannot be designated.	infrastructure, respectively. Statement amended in the SEA ER to remove reference to trial trenching. Statement amended in the SEA ER to remove reference to relocation of the proposed activities Text amended in the SEA ER to include sonar surveys. Text amended to sonar survey instead of potentially damaging geotechnical surveys in the SEA ER. Noted, text added in the SEA ER to refer to this. This text refers to the need to understand how the coastal processes may be altered as a result of cable installation and any protective measures installed with the cable which may lead to changes on the sediment dispersion and transport which may in turn impact heritage assets e.g. burial. Reference to JNAPC code has been removed in the SEA ER.



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	Coastal process assessment is not specifically conducted for archaeological purposes which the text seems to suggest, only as part of the general environmental assessment exercise so will not highlight at risk heritage assets. This detail is only covered in specific EIA chapters for the terrestrial/intertidal historic environment. Adherence to the JNAPC code is also incorrect and almost 20 years out of date. Firstly, the code was published by an NGO and has no formal government policy status and secondly the NPSs are very clear about viable mitigation measures which are to be produced in consultation with national curatorial bodies within the UK (i.e. Historic England).	
Historic England	No explanation was provided about key mitigation measures, specifically marine archaeological Written Schemes of Investigation (including public archiving duties) and offsetting measures through agreed reporting protocols for archaeological discoveries.	Noted. Text referring to Written Scheme of Investigation has now been included within mitigation section Table 40 in the SEA ER.
Historic England	Section 10.2 Monitoring. We welcome action to conserve and enhance heritage assets, regardless of designated status. We note that the objective description to protect international, national and local heritage designations and their settings does not appropriately recognise the UK MPS and therefore requires amendment to be aligned with UK Government policy.	Noted, 'and non-designated heritage assets' has been added to the objective description for the Cultural Heritage SEO in Table 26 of the SEA ER.



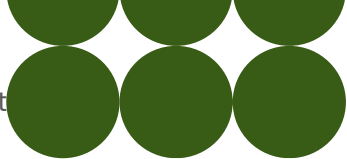
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Historic England	Potential for cumulative and in-combination effects. Areas have been identified where there is greater potential for these effects as projects associated with implementation of the draft HNDIP at construction stage and/or during the long-term operational stage. These areas are described as East of England, Offshore of Lincolnshire Connection Node, and Celtic Sea, we agree with this conclusion and add that such effects must be considered inclusive of loss of long-term access to heritage assets in order to complete this SEA exercise.	Noted, this has been added to Section 9.2.1 in the SEA ER.
Historic England	Historic England would like to draw attention to its MDE Heritage Accelerator (MDEHA) project (https://historicengland.org.uk/advice/planning/infrastructure/renewable-energy/accelerating-clean-energy-offshore/), which is significantly increasing the amount of heritage information available to inform marine development. The MDEHA project is adding detailed heritage information from previous Environmental Assessments and post consent investigations to the Marine Data Exchange (MDE) maintained by the Crown Estate. MDEHA is also using this information to enhance the Marine Historic Environment Record (Marine HER) that Historic England looks after. The Marine HER is currently undergoing a major refresh that includes its extension to the full extent of the UK Marine Area off England, rather than the territorial sea as previously. As a consequence of the MDEHA project, the Marine HER will provide a more comprehensive and richer source for future Environmental Assessments accompanying implementation of Holistic Network Design. It will also be useful in supporting	Noted. Reference to this project has been added to the mitigation (Table 40) and monitoring (Table 42) for Cultural Heritage in the SEA ER.



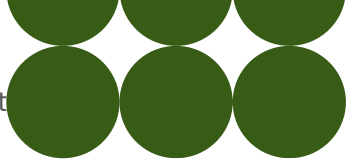
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	SEA monitoring and revision, as well as informing marine spatial planning (including the revision of Marine Plans and development of the Marine Delivery Routemap). The MDEHA project is being funded by the Crown Estate through its Offshore Wind Evidence and Change (OWEC) programme.	
Historic England	Further sources of robust baseline heritage data sets to reference can be found at Historic England's Open Data Hub which includes National Heritage List for England (NHLE) data (the only official up to date register of all nationally protected historic buildings and sites in England). The data hub allows easy access and integration to planning data with other systems. In addition, Historic Environment Records (HERs) provide access to comprehensive and dynamic resources relating to the archaeology and historic built environment of a defined geographic area and are regularly updated.	Noted. Reference to these datasets has been added to the mitigation (Table 40) for Cultural Heritage in the SEA ER for consideration at the project stage.
Joint Nature Conservation Committee	JNCC are pleased to submit our full response via email as there is insufficient word count to allow us to comment in full on the consultation documentation. JNCC have an agreed extension to submit our response by close of business on 2nd February 2026. Please see the email sent to box.enexternal@neso.energy	Noted. We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	Being the nature conservation body for the offshore marine region (outside of 12NM from the coast), our comments will focus on this area of the Implementation Plan and supporting documents, unless explicitly stated. We defer to Natural England, NatureScot, Natural Resources Wales and Department of Agriculture, Environment and Rural Affairs for	Noted. No action needed.



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	comment on the inshore elements of the implementation plan.	
Joint Nature Conservation Committee	JNCCs remit is as Statutory Nature Conservation advisor for offshore waters (more than 12NM from shore). We are pleased to see that HRA, MCZ and SEA Assessments have been undertaken to support the SSEP plan.	Noted. No action needed.
Joint Nature Conservation Committee	The plan focuses attention on the routing for cable corridors to shore, landing locations, onshore substations and converter stations. The plan does not include recommendations for the placement of wind farm areas, turbine layout, or platform position and the proposed HND corridors stop short of the wind farm application areas (so that any MPAs they may interact with are not considered within the SSEP and may skew the corridors favourability when in reality the development is not considered holistically with all elements of the development – similar to Salami Slicing a project).	The HND Implementation Plan has been expanded to clarify the scope of our Plan and subsequent environmental assessments. The SEA Environmental Report has further examined and expanded the spatial consideration of potential cumulative effects of development within identified route corridors of the Plan, as well as the potential for in-combination effects with other existing and planned infrastructure. To bring cumulative conclusions into the core narrative of the SEA, Section 9.2.1 Cumulative/in-combination effects has been expanded to include reference to planned offshore transmission reinforcements and consideration of designated site avoidance. For cumulative/in-combination effected with other strategic-level plans, additional text has been added to expand on the potential interaction and in-combination effects, whilst also recognising that there is insufficient detail to fully assess the cumulative and in-combination effects at this strategic level, as there are no confirmed designs or methodologies for each of the cable routes. Relevant plans and projects should be considered and assessed further for the potential for cumulative and in-combination effects at the project level. Recommendations have been made towards dealing with these potential cumulative issues, which have also been fed through into the Plan. In accordance with the relevant HRA legislative test, in-combination



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		assessment is required only where adverse effects on integrity (AEOI) have been excluded for the HND Implementation Plan alone. The plan-level assessment has only concluded no AEOI where either (i) no impact pathway exists, or (ii) mitigation at project level would address potential effects. The assessment has not relied on impacts (with or without mitigation) falling below quantitative thresholds (e.g. a particular noise threshold) that could subsequently be exceeded by multiple projects in combination. Therefore, if a pathway of impact exists, the HRA has identified the need for mitigation and the measures available to avoid an adverse effect on integrity.
Joint Nature Conservation Committee	The plan is not legally, spatially or technically binding on developers and therefore does not restrict developers to use a corridor identified in the plan; therefore, development may occur outside the plan corridors.	Further information is outlined within our HND Implementation Plan, Environmental Assessments, and our HND Implementation Plan FAQ document issued alongside the suite of reports during the public consultation. We have also included a section on 'Future Project Development and Consenting' within the HND Implementation Plan which outlines the distinction between the strategic nature of the HND Implementation Plan and the subsequent project level developments. A figure has also been produced within the HND Implementation Plan to clearly illustrate how roles and responsibilities vary across the development of an offshore wind farm cabling project - from initial strategic recommendations through to detailed project development and consenting. The law will require developers to implement relevant measures through project level environmental assessment processes, such as HRA, and that will include measures such as those identified in the Implementation Plan Appropriate Assessment as being suitable. The purpose of the mitigation section in the Appropriate Assessment is to confirm that subject to detailed development there are mitigation measures which have been



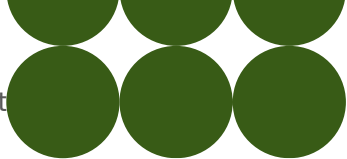
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		successfully applied before and should be able to be applied for these projects. Moreover, because the Plan is not binding on developers it also means that ultimately there is complete scope for Adverse Effect on Integrity (AEOI) to be avoided or adequately mitigated at the project level because there is freedom for the developer to design around constraints. The status and purpose of the documents in planning is to provide mitigation recommendations for developers.
Joint Nature Conservation Committee	Each project level design will be subject to assessment, but where projects are outside the plan area, the overall impact of the plan design will not be accurate in terms of impact to marine features, MPAs and the overall environment, which is the purpose of a Strategic plan.	The HND Implementation Plan provides study corridors and does not commit to specific designs or design details. Therefore, while the latest information on projects has been consulted the HRA and MCZa must be an assessment of the HND Implementation Plan and not stray into assessing individual Development Consent Orders (DCO). This is because the HND Implementation Plan deliberately allows flexibility for developers within the study corridors. The assessments have referenced available information from projects but must remain an assessment of the Plan (i.e. the parameters set by the 5 km wide study corridors) and not stray into assessing individual developers' proposals, for which there is a separate process. The HND Implementation Plan and its HRA/MCZa are inevitably a 'snapshot' of a point in time, as with any plan. Arguably consented developments could be omitted entirely from the HRA (except in combination) but that would involve frequent changes to the Plan. Instead, there is a cycle over which the plan will be updated. Consented wind farms would be included in the 'in combination' assessment (as these are not part of the Plan). If 'transmission assets are waiting recommendation' then in principle they have not yet been fixed or finalised. It is important that the HRA and MCZ of the Plan assess the Plan and not the subsequent cable projects which are subject to their own HRAs. All the mitigation measures discussed in the HRA and MCZa report are known to be effective from other projects. At the Plan level, since detailed



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		design information or routes are not set by the HND Implementation Plan, the consideration of mitigation at the Plan level is a matter of identifying that effective mitigation solutions exist. They will, however, need tailoring and a more detailed investigation, for each DCO in order to ensure they are designed effectively and if necessary to allow the identification of additional mitigation measures. With regards to monitoring, the "HND Implementation Plan Iteration Schedule" has been expanded to provide more detail on the future monitoring phases and expectations around how changes, such as individual HND/HNDFUE project updates or wider industry knowledge, will be captured. This also captures 'triggers' or 'material changes' that would result in the Plan being revised more frequently than the current three-year schedule.
Joint Nature Conservation Committee	The summary of the HND design process is extremely useful to better understand plan development steps.	Noted. No action needed.
Joint Nature Conservation Committee	JNCC note that assessments are drafted primarily considering the cable corridors, while SNCB assessment is focussed on MPA impacts. As previously commented throughout the HND process, the supporting HRA and MCZ Assessments are considering impacts to the MPAs both alone and in combination, it would be helpful (and speed our response) to have information presented primarily per designated area rather than by cable corridor.	Given the stage we are at with the HND Implementation Plan, and this is a presentational change rather than a technical one, this change will not be made for this iteration but will be considered for future updates.



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	The HND/ HNDFUE process has been a positive step towards influencing design of networks early in the design process to allow for positive outcomes for the environment. Lessons learnt from this process should be applied to the follow-on processes of the SSEP and CSNP to ensure that the work done to date by all agencies is worthwhile.	Noted. No action needed.
Joint Nature Conservation Committee	JNCC are pleased the applicant has used JNCCs Marine Pressures-Activity Database (PAD) and the Marine Evidence based Sensitivity Assessment (MarESA) to assess the potential impacts on specific habitats.	
Joint Nature Conservation Committee	As previously advised in our screening response (09 January 2025), and draft RIAA (26 June 2025) JNCC would like to highlight that the terminology within the RIAA requires updating. References to 'European sites' should be updated to their current UK designation as SACs and SPAs within the 'National Site Network,' following amendments to the Habitats and Species Regulations 2017 by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.	As per our previous response when this point was previously raised, European sites is still acceptable terminology (used for example in legislation) and in Scotland is the official terminology: https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/international-designations/european-sites
Joint Nature Conservation Committee	JNCC would like to clarify whether the plan is grounded in a realistic worst-case scenario. The RIAA states that worst case has been used for water quality and marine mammals but is not explicit for other receptors.	It can be confirmed that the assessment is grounded in a worst-case scenario. Further text has been added to the HRA to clarify this (p34).
Joint Nature Conservation Committee	JNCC agree with the screening criteria applied for the test of LSE.	Noted. No action needed.



Respondent	Comment	Response or Action
on Committee		
Joint Nature Conservation Committee	It should be noted that only mitigation measures that are 'sufficiently certain' and likely to be effective in practice should be taken forward in any appropriate assessment. As developers are not legally bound under the plan, JNCC would like clarification if developers are duty bound to implement mitigation within the plan either through project design or through mechanisms such as marine licence conditions at project level. If this is not the case, then JNCC does not believe that mitigation can be seen to be sufficiently certain and therefore cannot be relied upon in the assessment process.	Developers will not be duty bound to implement the mitigation because NESO has no statutory control over developers. For the same reason the Plan is also not binding on developers (unlike for example The Crown Estates Offshore Wind Licensing rounds). Since developers can ultimately deviate from the study corridors shown in the Plan it is also appropriate that the mitigation is not binding. Protection of European sites at the project level will arise from the consenting regimes for each project, which will require their own HRA. All strategic mitigation that has been included within the HND environmental assessments is based on a high level of confidence it would be technically feasible for the developer to deliver based on the strategic level of information known. The ultimate feasibility will be determined at a project level when detailed designs are known, and necessary technical and environmental survey work has been conducted. These assumptions are detailed throughout the HND Implementation Plan and environmental reports. The SEA mitigation has taken on board specific recommendations from respondents and clarified that specific mitigation measures will be based on the design detail available at the project stage. The HND Implementation Plan and its HRA (and thus the HRA recommendations) are advisory, not binding. If mitigation is potentially feasible (and it has to be considered so until the project level) then by the methodology used and agreed by ESG Stakeholders it needs detailed investigation at project level but there is potentially effective mitigation available).



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	JNCC advise the preferred approach is to follow the mitigation hierarchy and avoid designated sites entirely. If avoidance is not possible, efforts should focus on avoiding impacts to the key features within these sites as a priority. This has not been possible for all corridors, with 3 corridors taken forward for derogation (A_1_to_Birkhill Wood, R4_1_to_Birkhill Wood, and R4_2_to_Birkhill Wood).	Noted. Consideration of the mitigation hierarchy, with particular focus on avoidance of designated sites as far as practical, was paramount in the development of the Plan. Through our strategic environmental assessments, avoidance of key constraints where practical was a significant factor in determining reasonable study corridors. An overview of the HND/HNDFUE appraisal process and the Constraint BRAG Ratings are detailed within Appendix A of the HND Implementation Plan. The aim of the Plan and environmental assessments is to guide future developments and mitigation through strategic oversight. Developers will also be required to implement relevant measures through their own environmental assessments. Unfortunately, there is a limit to the extent to which the HND Implementation Plan can avoid European sites and MCZs where export corridors must connect windfarms located within European sites or MCZs (beyond the control of NESO) to shore. However, where this has been the case, efforts to minimise impact where possible have been taken.
Joint Nature Conservation Committee	JNCC are pleased to see that the RIAA includes a tabulated summary of other known relevant developments considered, along with a rationale for their inclusion or exclusion. This informs in combination effects of the plan.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	We would like to ensure that all Annex I habitats, such as 'sandbanks which are slightly covered by seawater all of the time' have been considered in the assessment. The receptors listed do not include these features (although are included in Appendix A) and so, we would like to ensure that	Sandbanks which are slightly covered by seawater all of the time have been considered in the assessment under the heading 'subtidal habitats'. While it has not been specifically listed as a feature in the body of the HRA that is true for many qualifying features of European sites because the HRA is presented by impact pathway and habitats with similar sensitivities (e.g. subtidal habitats) have often been treated together to reduce the length



Respondent	Comment	Response or Action
	they are consistently named and considered where relevant using the correct terminology.	of an already lengthy report. Specific qualifying features are referenced in Appendix A, as JNCC notes.
Joint Nature Conservation Committee	JNCC are pleased to see that permanent and temporary habitat loss has been included as part of the assessment. Current experience suggests that it is unlikely that cable protection will be removed on decommissioning and hence this would also be classed as a permanent loss of habitat.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	JNCC agree with the application of the precautionary principle to using the worst-case scenario in plan level assessments. Cable installation methodologies follow typical scenarios within the UKCS using well known techniques with known indicative footprints and environmental interactions. Therefore, it is possible for the plan to account for the worst-case scenario for cable installation methodologies.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	Sites are screened in if impacts from development within the corridors are considered capable of significantly affecting protected features, or ecological and geomorphological processes of the Marine Protected Area (MPA). The impact pathways have been considered in Appendix A and threats, pressures and links to the conservation objectives are provided in Appendix B.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	We appreciate there is a large amount of information to present however JNCC would like to see the relevant conservation objectives and site condition information within the tables in Appendix B as it currently does not	There are links to the conservation objectives for each entry. Without repeating the conservation objectives (which are often relatively repetitive for European sites) Appendix B is already over 300 pages long. Therefore links have been provided to make the documents more manageable for readers.



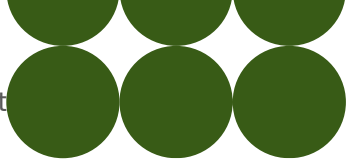
Respondent	Comment	Response or Action
	provide sufficient information for the reader to follow or to inform Appropriate Assessment.	
Joint Nature Conservation Committee	JNCC are pleased to note that the Pressure Activity Database has been used to inform the potential pressures. We note that Natural England and JNCC's Supplementary Advice on Conservation Objectives (SACO) and Advice on Operations (AoO) have also been consulted.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	Three HND/HND FUE plan corridors are within Dogger Bank SAC and are required to connect windfarms developed within the site and therefore unavoidable. These corridors are PA_1_to_Birchall Wood, R4_1_to_Birkhill Wood, R4_2_to_Birkhill Wood with SW_E2a_2_Near Richmond less than 1km from the site boundary.	Noted. A Derogations Report has been produced to cover each of these Dogger Bank related study corridors.
	The whole of the Dogger Bank SAC is designated for the Annex I habitat 'sandbanks which are slightly covered by sea water all the time.' We agree with the impact pathways included for this site, however, advise that the SAC is in unfavourable condition and is not currently meeting its conservation objectives due to the existing pressure from anthropogenic activities taking place Within the site. As the statutory nature conservation body responsible for the Dogger Bank SAC, JNCC advise that alternatives to the proposed plan are unlikely to be identified for the three corridors within the MPA and where this is not possible, a derogation will be required. We would strongly encourage a 'without prejudice' plan level	



Respondent	Comment	Response or Action
	derogation to be developed as has been the case for The Crown Estates Round 4 and CIP plan level assessments.	
Joint Nature Conservation Committee	We welcome the use of Woodward et al (2019) foraging ranges to scope in long-distance foraging seabirds, and the use of the amended foraging range for razorbill.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	We welcome the mitigation measures proposed on page 254. However, JNCC would like to see a commitment to the mitigation proposed at plan level to ensure it will be followed and refined if necessary, at project level. We emphasise that seasonal restrictions will be required in order to avoid adverse effect on sites for which red-throated diver and common scoter are qualifying features.	This has been covered as far as possible in the mitigation section of the conclusions. Ultimately NESO will not be delivering or consenting any cable routes so cannot commit to, or ensure that, mitigation identified at the Plan level is followed at the project level. Moreover, the study corridors themselves are not binding on developers so there must be flexibility at the Plan level for the developers to propose corridors different from those assessed in the HRA
Joint Nature Conservation Committee	Within the Habitats Regulations Assessment Report, in the underwater sound impacts section of Section 5 – Information to support Appropriate Assessment, we note that 5km has been used as the site screening distance for designated marine mammal sites from cable corridors, as 5km is the disturbance range used for geophysical surveys in the assessment. We advise that any Unexploded Ordnance (UXO) works that are necessary shall have a larger EDR (up to 20km for high-order clearance without a bubble curtain). As this would be the worst case and has not been considered here, we recommend that any UXO clearance campaigns are applied for in separate marine licences at the project level, and that project level Habitats Regulation Assessments (HRAs) consider UXO clearance to	Thank you for the helpful comments regarding underwater sound and UXO clearance. We recognise that UXO clearance, depending on the method employed, can have a larger disturbance range than geophysical survey activities. At this strategic stage, UXO requirements and clearance methodologies are not defined and would typically be subject to separate assessment and consent at project level. It would therefore not be proportionate to apply a precautionary worst-case clearance range across all corridors within this Plan-level HRA. The 5 km screening distance applied in Table 15 relates specifically to geophysical survey activities and remains appropriate for that impact pathway at this stage. Any UXO surveys or clearance works, where required, will be assessed in detail through project-level HRA based on the proposed methodology and worst-case scenario.



Respondent	Comment	Response or Action
	ensure that the worst case has been assessed, even if it is not then included in that projects' Development Consent Order (DCO). On the basis that only geophysical surveys are considered in Table 15, we agree that those cable corridors that are more than 5km from a designated site are unlikely to result in an Adverse Effect on Site Integrity (AEoSI). It is worth noting that should the 3km EDR be used, then it is possible that some cable corridors with a designated site currently within its disturbance zone may in fact not require assessment at the project level, and this should therefore be considered.	
Joint Nature Conservation Committee	For most of the other impact pathways listed in Section 5 of the HRA that are considered to potentially adversely affect marine mammals (Suspended Sediment Concentration (SSC), changes in water quality and changes in prey availability), JNCC agree that any impacts are likely to be highly localised and therefore affect only a small proportion of any designated sites, and are therefore unlikely to result in any AEoSI and can be screened out from further assessment. The one remaining impact pathway, collision risk with vessels, we agree that the risk is negligible on condition that mitigation measures, including a Vessel Management Plan, are implemented.	Noted - No update required.
Joint Nature Conservation Committee	On the basis that there are currently no confirmed designs for each of the cable routes, meaning that in-combination effects cannot be accurately assessed, we agree that all projects should be assessed for these at the project level. Whilst the mitigation measures mentioned in the HRA	Noted - No update required.



Respondent	Comment	Response or Action
on Committee	document, including the adherence to the relevant JNCC Marine Mammal Mitigation guidelines, will address impacts from the individual corridors, the magnitude and extent of in-combination impacts will require further assessment at the project level.	
Joint Nature Conservation Committee	Section 8 of the HRA lists some of the uncertainties associated with the development and potential in-combination impacts and suggests a raft of environmental design principles that could be incorporated at the individual project stage to limit environmental impacts. The top measure is HRAs at the project level, which JNCC agree is vital for ensuring that all potential impacts are accurately assessed once all required information is available. Other measures include: • Minimise environmental impact. • Avoid European sites that are avoided in the HND Implementation Plan • Avoid sensitive features that are avoided in the HND Implementation Plan • Reduce cable lengths. • Reduce external cable protection. • Reduce cable crossings. • Location of offshore infrastructure outside of European sites/sensitive features • Consideration of sediment processes (to include any additional impacts from external cable protection) • Avoid sensitive periods for European site features.	Noted - No update required.



Respondent	Comment	Response or Action
	All of which JNCC agree are suitable measures to implement, as they aim to avoid impacts, with minimizing them as a further measure where impacts cannot be avoided.	
Joint Nature Conservation Committee	JNCC are pleased to see that the terminology in the Derogation Report has been updated to include 'National Site Network' rather than 'European Site' as used in the RIAA.	Noted. No action needed.
Joint Nature Conservation Committee	JNCC agree with the mitigation hierarchy being applied and agree that where a feasible alternative or mitigation measures are not available that compensation will be required. Section 3 notes that there are no alternatives to delivering the study corridors within the offshore marine environment through the Dogger Bank SAC. The plan identifies that these corridors are of imperative public interest based on energy needs. JNCC would however still expect mitigation measures to be fully investigated to limit the amount of compensation required.	Noted – this will ultimately be a matter for detailed design at the project level due to strategic nature of the HND Implementation Plan, and the 5km study corridors being assessed.
Joint Nature Conservation Committee	Within offshore waters three HND/HND FUE plan corridors are within the Dogger Bank SAC. These corridors are PA_1_to_Birchall Wood, R4_1 to_Birkhill Wood, R4_2_to_Birkhill Wood.	Noted. No action needed.



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	We agree with the precautionary approach being applied to estimate the impacts of cable protection at plan level for the Dogger Bank SAC. However, we also question the need for cable protection to be installed within the Dogger Bank SAC as there is now an MMO Byelaw which restricts bottom towed gear (which is the main risk to cables in this area). Restricting the use of cable protection within the Dogger Bank SAC should be seriously considered as a mitigation measure.	Noted – this reflects the precautionary approach taken to the Derogations Report which is appropriate at Plan level. This will be reviewed at project level.
Joint Nature Conservation Committee	We note that the following compensation measures have been identified in TCE Round 4 HRA1 as possible for development of the three corridors which cross Dogger Bank SPA (PA_1_to_Birkhill Wood, R4_1_to_Birkhill Wood and R4_2_to_Birkhill Wood): • Removal of Debris • Enhancement of Existing Habitat • Reduction of other Pressures • New Site Designation TCE has concluded that an extension to the Dogger Bank SAC would provide like for like habitat²	Noted. The HND Implementation Plan HRA Derogations Report already makes reference to this.
Joint Nature Conservation Committee	Strategic compensatory measures may be available for impacts to Dogger Bank SAC through the Marine Recovery Fund (MRF), which should become operational by mid-2026. JNCC note that NESO will not accept responsibility for plan level strategic compensation and that this will be a requirement of individual projects under the plan and is an indicator of consenting risk at plan level. We also note that NESO will recommend that the developer for these 3 study	Noted – the Derogations Report already references this The reference has been updated to reflect the marine recovery fund being implemented from mid-2026.



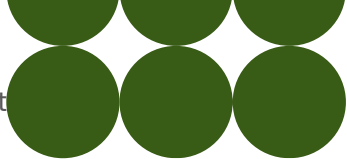
Respondent	Comment	Response or Action
	corridors should engage fully with Defra regarding compensatory measures. JNCC would like to reiterate that following the mitigation hierarchy, in the first instance, entirely avoiding marine MPAs including SPA, SAC, MCZs and Ramsar sites should be applied during cable route design and associated costs for compensation through the MRF or other routes included in feasibility assessments going forward.	
Joint Nature Conservation Committee	In terms of debris removal NESO should note the joint SNCCB advice on marine debris removal as compensation for impacts to benthic habitats from development which was published in 2023.	Noted. The HND Implementation Plan HRA Derogations Report already makes reference to this.
Joint Nature Conservation Committee	The Impact Assessment Process conducted by NESO for individual designs within the HND plan has the ability to change the original recommended designs for the spatial plans. It has become clear that there is no mechanism in operation for NESO to capture these changes and update the plan, accordingly, therefore changes to design are not reflected in the plan outcomes and conclusions. Are NESO able to update the plan as changes to design occur to allow transparency of plan impacts to the environment?	Clarifications have been made in Plan Iteration Section to specify what updates will be made during the next Plan (and environmental assessment updates. This includes HND/HNDFUE project updates as well as changes taking place as a result of the Impact Assessment Process.
Joint Nature Conservation Committee	JNCC appreciate that an MCZ assessment has been undertaken as this is not mandated that Offshore Coordination conduct a MCZ assessment.	Noted. No action needed.



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	We note some of our comments have been addressed in particular in relation to including decommissioning for the pressure pathway permanent loss and in relation to suspended sediment concentration zone of influence (ZOI) has been extended to 17km, and that temporary disturbance has been included for SW Ela to Branxton for all protected features.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	Where the ZOI for SSC has been extended to 17km, JNCC query if any additional MPAs have been included in the MCZ assessment. We appreciate the update to table 3 and the justification provided for screening sites out for further assessment based on ZOI and likelihood of interaction.	Following review of the updated ZOI, no additional MCZs were identified within 17 km of the relevant corridors beyond those already presented in Table 3 of Stage 1 MCZ.
Joint Nature Conservation Committee	Given that NESO have not committed to entirely avoiding MCZs, JNCC are pleased to see that temporary disturbance, permanent loss, and the introduction of invasive non-native species are assessed for all cable corridors which are planned to pass within an MCZ as it is not currently known where cable protection measures may be required.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	At the plan level, cable crossing locations remain undefined. This introduces the potential for permanent habitat loss across the Plan area, which must be considered unless there is a clear commitment to avoid crossings within MCZs/NCMPAs. Avoiding interaction with existing seabed infrastructure can reduce the need for additional cable protection, though this cannot be entirely ruled out and should be addressed in the assessment.	Noted. However, due to the underlying assumptions used for HND/HNDFUE design recommendations, routes for the study corridors have been proposed to largely avoid MCZs/NCMPAs. Where slight overlap occurs, such as with Holderness Offshore MCZ, these areas have been taken forward to Stage 2 MCZ assessment for consideration at a strategic level. The indicative nature of the 5 km study corridors allows for further refinement at the project level, meaning that protected designations can be avoided completely where feasible. The options appraisal and technical constraints work have sought to minimise interaction with designated sites, and the assessment assumes that where alternative



Respondent	Comment	Response or Action
		habitat is available, crossings would be located outside protected sites. While specific crossing locations will be determined at project level, the mitigation hierarchy including micro-siting to avoid protected features and existing infrastructure will be applied. On that basis, and given the limited and localised nature of any potential cable protection, the Plan-level assessment does not conclude a risk of significant hindrance to conservation objectives.
Joint Nature Conservation Committee	JNCC note and welcome the inclusion of the pressure 'changes to prey availability,' particularly given potential cumulative pressures on seabird populations.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	Potential in combination effects have been identified but at plan level have not been assessed for temporal and spatial overlap and similar pressure pathways therefore not adequately assessed. This should be brought into the SEA for consideration.	Cumulative effects of offshore infrastructure as the marine area gets busier are acknowledged. Strategic corridors are 5km wide, however the actual cable trenching footprint is only several metres. Spawning and nursery grounds were considered and assessed as an indicator for sensitivity for commercial fisheries (material assets) in the SEA, however data suitable for use at this strategic level covers very large areas. Key fishing grounds as well as spawning and nursery grounds should be further considered at the project level when further detail for specific areas is available.
Joint Nature Conservation Committee	While no MCZs have been designated in Welsh waters to date, the Welsh Government is currently identifying suitable locations for conservation. Could NESO confirm whether any newly designated sites will be incorporated into a future update of the HND plan	The MCZ will be updated when the HND Implementation Plan is updated and this would include any newly designated MCZs



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	We note that NESO still include the corridor SW Ela to Hawthorn Pit where its ZOI for suspended sediment concentration overlaps with North East of Farnes Deep HPMA and the MCZ will be assessed in Stage 2 assessment.	Noted. No action needed.
Joint Nature Conservation Committee	We note that the MCZ assessment continues to reference NMFS, previously we advised that the correct sound exposure criteria for auditory injury in marine mammals are Southall et al 2024.	The 2024 NMFS Technical Guidance, now published, has been considered and incorporates the relevant Southall et al. (2019, 2021) framework. The guidance on auditory thresholds for marine mammal hearing groups is reflected in the MCZ assessment. The Southall et al. (2024) reference cited appears to correspond to the NMFS 2024 guidance rather than a separate paper. Project-level noise assessments will apply the latest NMFS 2024 criteria as detailed design becomes available
Joint Nature Conservation Committee	JNCC note that eight study corridors have been identified as having potential to hinder the conservation objectives of an English MCZ, Highly Protected Marine Area (HPMA), or Scottish Marine Protected Area (MPA), despite the implementation of best practice mitigation measures and installation methods. Under section 126 of the MCAA 2009 at project level the developers of these 8 corridors will need to demonstrate there is no other means of proceeding, the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment and that arrangements will be made by the applicant for the undertaking of, measures of equivalent environmental benefit (MEEB) to the damage which the act will or is likely to have in or on the MCZ. To date opportunities to identify MEEB have been challenging	Noted The Stage 2 MCZ assessment concludes that potential effects of the proposed corridors are highly localised, temporary, and reversible, and crossings can be located outside protected sites where feasible. As such, significant hindrance to conservation objectives is not anticipated, and there is no requirement for Plan-level MEEB.



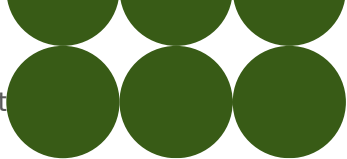
Respondent	Comment	Response or Action
	therefore JNCC recommend consideration of an alternative route avoiding the MPA entirely.	
Joint Nature Conservation Committee	If a route avoiding an MPA cannot be identified, then MEEB will need to be secured at plan level. While there is no precedent for plan-level MCZ derogation, there is benefit of reviewing these measures at plan level to fully understand the environmental impacts of development to support decision making in relation to other Government targets and an obligation. The Secretary of State (SoS) can then make an informed choice regarding prioritisation of government Targets.	Noted. The Stage 2 MCZ assessment concludes that potential effects of the proposed corridors are highly localised, temporary, and reversible, and crossings can be located outside protected sites where feasible. As such, significant hindrance to conservation objectives is not anticipated, and there is no requirement for Plan-level MEEB.
Joint Nature Conservation Committee	Consideration at plan level provides time for early consideration of developing MEEB either via the MRF, Scottish Government or other long list to compensate for environmental harm that may occur. As NESO are both applicant and public authority the responsibility for this lies completely with them and it is therefore essential that this process is transparent and considers all stakeholder advice.	Noted. The Stage 2 assessment concludes that, at Plan-level, the eight study corridors do not pose a significant risk of hindering the conservation objectives of the associated MCZs, HPMAs, or NCMPAs, provided the identified Other Means of Proceeding (OMP) are applied. Consequently, it is not considered necessary to progress to Plan-level consideration of MEEB at this stage. It is recognised that, at project-level, refined corridors and more detailed design information will be available at which point developers will be able to consider mitigation, compensation, and stakeholder input in line with regulatory requirements to minimise the potential for environmental harm.
Joint Nature Conservation Committee	For offshore waters Peterhead to Cenon and North East Farnes Deep HPMA have been included for Stage 2 Assessment. JNCC advise that NESO consider our comments in relation to impact pathways and zones of influence (ZOI), and if necessary, amend the Stage 2 assessment accordingly. This may determine the number of study corridors considered for an impact pathway and increase	Understanding potential compensatory measures remains relevant and will be considered at project level if design and crossing locations indicate a need. The Plan-level assessment provides sufficient information to inform decision-making in the context of broader government targets without progressing to Plan-level MEEB or derogation.



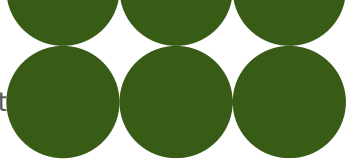
Respondent	Comment	Response or Action
	the number of study corridors screened into the Stage 2 assessment for derogation.	
Joint Nature Conservation Committee	We agree that suspended sediments will disperse locally and unlikely to pose a significant risk to marine mammals, migratory fish or benthic environments within the site if the 2km separation between North East Farnes Deep HPMA and the SW Ela to Hawthorn Pit corridor is implemented. JNCC note NESO has committed via 'Other Means of Proceeding' to avoid the HPMA by a minimum of 2km at project level. JNCC note the intention for NESO to avoid interaction with the North East Farnes Deep HPMA by reducing the width of the design corridor of SW Ela to Hawthorn Pit to allow a 2km separation distance. However, this is 'dependant on the influence of other design constraints.'	The SW_Ela_to_Hawthorn_Pit corridor is planned to maintain a minimum 2 km separation from the North East Farnes Deep HPMA, as set out in the Plan-level OMP. While final alignment may be influenced by other design constraints the Stage 2 assessment assumes this buffer can be achieved, with micro-siting and mitigation applied at project level to minimise any potential impact.
Joint Nature Conservation Committee	It is JNCCs opinion that the SSEP should be totally excluded from impacts from SSEP development and the plan boundary needs to demonstrate this intention. Plan design boundaries should then be adhered to by individual projects. Any changes to project require that the plan be updated accordingly so that the responsible authority can understand impacts of the overall developments.	Noted
Joint Nature Conservation Committee	JNCC refer NESO to our previous advice in relation to the Peterhead to Cenosa corridor (dated 22nd July 2025) which crosses East of Gannet and Montrose NCMPA, and our advice still stands that:	Responses to each point: JNCCs concern regarding the use of the term 'unavoidable' is noted. At Plan level a range of strategic routing options were considered, including routes that would avoid the East of Gannet and Montrose Fields NCMPA.



Respondent	Comment	Response or Action
on Committee	• JNCC disagrees with the claim that routing a power cable through the EGM MPA is unavoidable. This conclusion is purely based on economic decisions and has not considered environmental considerations, environmental targets and impacts to the National Site Network. • If the mitigation hierarchy had been followed at the outset, this would avoid, reduce and minimise impacts to the EGM MPA a smaller footprint of impact would have resulted with less permanent impacts to the site features. The developer appears to have dismissed this option for economic reasons by not considering mitigation, government targets or compensation costs (MEEB) sufficiently early enough.	These alternatives were assessed in terms of engineering feasibility, seabed constraints, interaction with existing infrastructure, and the resulting extent of seabed disturbance. Options avoiding the NCMPA would require substantially longer cable lengths and additional seabed crossings, resulting in a greater overall footprint of environmental effects. On this basis, the selected corridor is considered to represent the option with the lowest overall environmental impact at Plan level. Text has been updated to clarify this in MCZ Stage 2 section INTOG. • Noted. The mitigation hierarchy has been followed in the development and assessment of the study corridor and is detailed in Stage 1 MCZ assessment. The hierarchy has been applied at the appropriate stage for Plan-level assessment, with strategic alternatives considered during corridor identification. Further application of the mitigation hierarchy through project-specific design and micro-siting will be undertaken by developers at project level.. • Regarding the permanent habitat loss figure, our assessment calculated 15,000 m² based on conservative assumptions of 750 m length and 10 m width of cable protection at each of two crossings. We note JNCC's figure of 18,800 m² and would welcome clarification on the assumptions underpinning this calculation to understand the difference. The MCZ assessment focuses on permanent habitat loss as this is most relevant to long-term conservation objectives and site integrity. Temporary seabed disturbance during installation is considered reversible, particularly for the subtidal sands and gravels habitat that dominates the likely crossing locations, which demonstrates high recoverability due to natural sediment dynamics. At Plan level, the extent and frequency of future maintenance or decommissioning activities cannot be quantified and would be subject to project-level assessment. When considered in the context of the MPA extent (1,839,000,000 m²) and the dynamic, recoverable nature of the



Respondent	Comment	Response or Action
		affected habitat, the permanent footprint is not expected to hinder conservation objectives • JNCC advises a 'recover' objective for ocean quahog and deep-sea muds, including their supporting sands and gravels. It is acknowledged that ocean quahog and deep-sea mud habitats within the East of Gannet and Montrose Fields NCMPA are subject to recover conservation objectives. The MCZ assessment has considered this context and assessed whether the proposed activities would materially affect the ability of these features to recover towards favourable condition at the site scale. Text has been updated to consider this in MCZ Stage 2 section INTOG. • Noted and agreed that pressures on protected features should be reduced where practicable. At Plan level, the selected corridor minimises additional pressure through reduced cable length, fewer crossings and constrained permanent footprint. Opportunities for further pressure reduction would be explored through project-level design, installation methods and mitigation measures. • Noted regarding the advice that the proposed cable corridor could hinder the conservation aims of the East of Gannet and Montrose Fields NCMPA and their recommendation that alternatives be considered prior to any consideration of derogation. The Plan has considered alternative routing options at Plan level, including options that would avoid the NCMPA. These alternatives were assessed in terms of engineering feasibility, interaction with existing seabed infrastructure, and the overall extent of seabed disturbance. At Plan level, these options were not considered to offer an environmentally preferable outcome, as they would result in substantially longer cable lengths, additional seabed crossings and a greater footprint of disturbance, potentially increasing effects on the wider National Site Network. Based on the evidence available at Plan level, we do not consider that the



Respondent	Comment	Response or Action
		proposed corridor is likely to significantly hinder the achievement of the conservation objectives of the MPA. The assessment concludes that permanent habitat loss would be highly localised in extent, that temporary disturbance would be reversible, and that affected habitats are expected to recover, such that the ability of protected features to recover towards favourable condition at the site scale would not be materially affected. It is recognised that the current limitations associated with like-for-like compensation measures for ocean quahog and deep-sea mud habitats. However, as the Plan-level MCZ assessment does not conclude significant hindrance to the conservation objectives, consideration of derogation and associated compensatory measures is not required at this stage. Further refinement of design, mitigation and, if necessary, alternative approaches would be undertaken at project level where sufficient detail is available. • JNCC’s recommendation that Stage 2 MCZ assessments should provide early visibility of consenting risk and the potential role of mitigation, enhancement and biodiversity measures (MEEB) is noted. At Plan level, the Stage 2 assessment has considered avoidance and minimisation of impacts through strategic routing, reduction in cable length and number of crossings, and assumptions regarding micro-siting and installation methods. On the basis of this assessment, the proposal is not expected to significantly hinder the conservation objectives of the East of Gannet and Montrose Fields NCMPA. As significant hindrance has not been identified, consideration of MEEB is not triggered at this stage. Furthermore, the identification of specific MEEB, technological solutions or design commitments would be speculative at Plan level due to the absence of project-specific design information. The Scottish library of measures and appropriateness of any mitigation, enhancement or compensation measures will be considered at project level should future assessments identify a requirement to do so.



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	Section 1.6 – As previously advised, JNCC are a statutory consultee for SEA in England, Scottish offshore waters, and Welsh offshore waters. We have been included in consultation however, JNCC are not listed as statutory consultees in the ER. Please can this section be updated accordingly.	Noted, JNCC have been added to the statutory consultees in Section 1.6 in the SEA ER.
Joint Nature Conservation Committee	We note that the SEA Scoping baseline information has been updated to include reference to documentation recommended by SNCBs.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	JNCC note that the SEA Scoping table has been updated to include high-level impacts including those from pressures listed for installation maintenance and decommissioning.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.
Joint Nature Conservation Committee	We are pleased to review that the HND Implementation Plan will have due regard for the Habitats Directive and Birds Directives. This should extend to any Annex I features outside a site and Annex II species.	The following text has been added to the beginning of Section 3.2.1 in the SEA ER: The draft HND Implementation Plan should also have regard to Annex I habitat features and Annex II species occurring outside designated sites.
Joint Nature Conservation Committee	JNCC note NESO responses to our previous comments in Appendix A and that all phases of construction, operation and decommissioning have been discussed and assessed in the SEA ER.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved.



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	We understand that for offshore waters direct permanent habitat loss is considered for the locations where cable protection measures are required. Previously JNCC advised that the operation, maintenance and decommissioning phases of the Plan are included for all issues within Biodiversity Flora and Fauna for consistency and would like to confirm this has been considered in the HND SEA. For example, the potential environmental issue 'indirect loss of habitat and species appears to cover physical disturbance (scour and abrasion) but is only included for the operational phase. The issue 'damage or disturbance of offshore' is included for the decommissioning phase but not the construction and operational phase. JNCC consider it would be clearer if all issues were considered for all stages of potential environmental issues for the SEA plan.	Noted, this has been considered in the assessments and has been specifically added to Table 2 and the Key Issues for Biodiversity, Flora & Fauna in the SEA ER.
Joint Nature Conservation Committee	JNCC note the comments in appendix A regarding leaving cable protection in situ can 'reduce double habitat loss.' JNCC advise this would be very site specific and would be pleased to review any evidence used to support this position.	Double habitat loss amended to 'additional' habitat loss in the SEA ER, such as may occur where species have colonised the hard protective structures which are used for protection, the initial habitat loss occurs with cable installation and this second double habitat loss can occur if protective structures/cables are removed.
Joint Nature Conservation Committee	JNCC note NESO are aware of the Welsh Government MPA Network Review and Defra compensatory MPAs (cMPAs). These areas are not currently considered within the plan and JNCC welcome clarity on the frequency of updates to the plan to incorporate this information so that consenting risk of the plan area can be understood by developers.	'Plan Revision' section of the HND Implementation Plan has been expanded to show that updates will not only cover developments through the Impact Assessment process, but also updates to legislation and designations.



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	Section 3.2.1.2 lists habitats considered particularly sensitive to cabling. JNCC consider that any habitat can be sensitive to disturbance and habitat loss from cable protection measures and is dependent on-site specific sensitivities and the habitat ability to recover.	Noted. NRW, JNCC and NE advice on sensitivities have been discussed in this section. A caveat has been added in the SEA ER noting that any habitat can be sensitive to disturbance and habitat loss from cable protection measures, depending on-site specific sensitivities and the habitat ability to recover.
Joint Nature Conservation Committee	JNCC note the potential for the HND Implementation to interact with existing marine infrastructure and advise that in order to minimise rock deposits required for cable and pipeline crossings that existing infrastructure is avoided where possible or planned to minimise the number of cable crossings particularly within MPAs.	Noted, this has been specified as part of the general mitigation in Section 10.1.1 of the SEA ER.
Joint Nature Conservation Committee	Due to the scale of future developments offshore, in order to minimise impacts to the marine environment, it may be necessary for the Plan to consider co-location of infrastructure where possible and collaboration to allow installation and maintenance of adjacent infrastructure to be planned at the same time. This approach will minimise the footprint to marine benthic habitats limiting the extent and duration of any disturbances and minimise persistence of vessel activity. This is particularly important within sites or where there are sensitive features.	Noted. Spatial consideration of preferred cable routes in the Plan and other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure in the SEA ER and includes a recommendation for coordination.
Joint Nature Conservation Committee	JNCC have reviewed the presentation of the BRAG ratings (Appendix C) and accept the definitions for the environment, however some clarification of how overall scoring is applied (Appendix E) and ranking is decided between environment, community and technical constraints would be welcome.	The BRAG ratings were established prior to the SEA process as part of early design option appraisal. Appendix E presents a guide to scoring against the SEOs, describing how it was planned to score against the SEOs for significance of effects to calibrate the appraisals.



Respondent	Comment	Response or Action
Joint Nature Conservation Committee	Alternatives – The summary environmental assessments for each HND cable corridor shortlisted are given in Appendix F.	Noted. No action needed.
Joint Nature Conservation Committee	The recommended designs taken forward within the plan within offshore waters which have potential for significant short term negative impacts have been identified as Dogger Bank SAC, Southern North Sea SAC, Inner Dowsing North Ridge and Race Bank SAC, Greater Wash SAC, Outer Firth of Forth and St Andrews Bay Complex SPA, East of Gannet and Montrose NCMPA, The North Anglesey Marine SAC, The Bristol Channel Approaches SAC. and Liverpool Bay SPA. JNCC agree with this conclusion. JNCC would also like long term impacts considered.	The aim was to avoid all designated sites, areas of sensitivity and also the need for cable protection where benthic habitat is designated. If this is identified as a requirement at the project level, the potential for long-term effects on local habitats is acknowledged. Short-term, as referenced in the temporal scope on p.25 of the SEA ER, considers the construction phase of the works. The language has been clarified in the assessment in the SEA ER to note that the of disturbance risk is short-term intermittent (construction, maintenance, decommissioning).
Joint Nature Conservation Committee	JNCC are pleased to see the mitigation hierarchy is being followed to avoid and reduce impacts to the marine offshore environment. Where this is not possible (for connecting windfarms located within an MPA such as EGM NCMPA and Dogger Bank SAC) compensation options may be available – see comments in relation to MCZ and HRA assessments and MRF and Scottish Library of measures.	Noted. Compensation has been referred to as part of the mitigation hierarchy in Section 10 in the SEA ER, and may need to be considered at the project level.
Joint Nature Conservation Committee	JNCC are pleased to see that monitoring of project level mitigation has been proposed during and after works and that site specific surveys will be undertaken to identify baseline conditions. JNCC would be interested in access to this data to inform	Noted. Recommendation for the sharing of project-level data via the Marine Data Exchange has been added to the General Mitigation in Section 10.1.1 of the SEA ER.



Respondent	Comment	Response or Action
	knowledge on seabed habitats and nature conservation, on behalf of the Council for Nature Conservation and the Countryside, Natural Resources Wales, Natural England and NatureScot. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems. we recommend sharing of data via portals such as the Marine Data Exchange. We agree with the approach to plan level mitigation measures proposed in the table in section 10.1.2 which will be refined by site specific conditions informed by baseline survey data.	
Joint Nature Conservation Committee	JNCC welcome the approach of timing restrictions for construction and maintenance works to avoid potential for negative cumulative impacts	
Joint Nature Conservation Committee	The conclusions of the SEA reinforce the need for early, strategic avoidance of sensitive areas, clear integration of environmental data into design choices, and the consistent application of best-practice mitigation across all stages of development. Close collaboration between NESO, developers, statutory advisers and regulators will be essential to address uncertainties, manage cumulative pressures and safeguard nature while enabling the transition to clean energy.	Noted. No action needed.
Joint Nature Conservation Committee	A distinction has been made in Appendix D between SAC and SPAs with sensitive features and without sensitive features. Please could NESO confirm how they intend to draw	This did not come from the HRA and MCZ assessment as these assessments followed the initial route consideration and BRAG rankings. All SACs and SPAs were considered sensitive, and given a BRAG of Amber or



Respondent	Comment	Response or Action
on Committee	this distinction in the assessment and if this will come from the MCZ and HRA assessments? Please refer to the JNCC site information centre or equivalent for other SNCBs and our advice on operations to identify if features are sensitive to development activities? Information on MPA sensitivity can be found here: https://jncc.gov.uk/news/site-information-centres-one-stop-shops-for-offshoremarine-protected-area-information/	Red. A distinction was made between sites designated for mobile species versus benthic habitats given the greater potential likelihood of long-term permanent effects on qualifying interest features. This was informed by the NE/JNCC advice document (https://data.jncc.gov.uk/data/3c9f030c-5fa0-4ee4-9868-1debedb4b47f/NE-JNCC-advice-key-sensitivities-habitats-MPAs-offshore-windfarm-cabling.pdf), the NE/JNCC advice document 'Nature conservation considerations and environmental best practice for subsea cables for English Inshore and UK offshore waters (2022)', and the NRW advice document (https://www.marinedataexchange.co.uk/resources/key-documents/TCE/raw-data/101/1710/6173_NaturalResourcesWales_SensitivityOfMar.pdf). This was used at the earliest stage to give a higher ranking for initial avoidance of sites with these features. However, the aim was to avoid all designated sites.
Joint Nature Conservation Committee	JNCC defer to other SNCBs for information on inshore MPAs.	Noted. No action needed.
Joint Nature Conservation Committee	We note that the key issues highlighted for Biodiversity, Flora and Fauna include only the construction phase of the Plan. As mentioned above, JNCC advise that significant impacts can arise from maintenance and decommissioning activities and would like to see these phases thoroughly considered in the SEA assessment.	Noted, this has been considered in the assessments in the SEA ER and has been specifically added to Table 2 and the Key Issues for Biodiversity, Flora & Fauna in the SEA ER.
Joint Nature	JNCC are particularly concerned with the amount of potential rock protection required for cable development,	Noted, this has been included in the general mitigation in Section 10.1.1 of the SEA ER.



Respondent	Comment	Response or Action
Conservation Committee	maintenance and decommissioning as this can lead to permanent habitat loss and / or change. As per the mitigation hierarchy we advise that route development seeks to select corridors firstly outside of MPAs, or if within MPAs then designated features are avoided. Further mitigation of impacts can be realised where burial is achievable and likely to remain buried throughout the lifetime of the cable and crossings are minimised. Given predicted climate change and potential acceleration of this, JNCC recommend careful consideration of future physical environmental conditions when considering cable burial requirements particularly in areas with mobile seabed features.	
Joint Nature Conservation Committee	Due to the scale of future developments offshore, in order to minimise impacts to the marine environment, it may be necessary for the Plan to consider co-location of infrastructure where possible and collaboration to allow installation and maintenance of adjacent infrastructure to be planned at the same time. This approach will minimise the footprint to marine benthic habitats limiting the extent and duration of any disturbances and minimise persistence of vessel activity. This is particularly important within sites or where there are sensitive features	Noted. Spatial consideration of preferred cable routes in the Plan and other projects has been further considered and expanded in Section 9.2.1 Cumulative / In-combination effects of cabling and onshore infrastructure with other HND cables and existing and planned infrastructure in the SEA ER and includes a recommendation for coordination.
Joint Nature Conservation Committee	JNCC also advise that where installation may be within a site where byelaws for fisheries are in place prohibiting bottom towed gear, that rock protection is not required in such areas.	Noted, this has been added to the mitigation in Table 40 in the SEA ER.



Respondent	Comment	Response or Action
on Committee		
Joint Nature Conservation Committee	The key environmental pressures that should be considered for cable installation, maintenance and decommissioning are: • Abrasion/disturbance of the substrate on the surface of the seabed. • Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion. • Physical change (to another seabed type). • Physical change (to another sediment type). • Changes in suspended solids (water clarity). • Smothering and siltation rate changes (Light). • Introduction or spread of invasive non-indigenous species (INIS). • Habitat structure changes – removal of substratum (extraction). • Water flow (tidal current) changes, including sediment transport considerations. • Underwater noise changes, vibration and visual disturbance.	Noted. These impact pathways have all been considered in both the HRA and MCZ where appropriate. Table 1 of the HRA shows how the impact pathways listed here fit within the impact pathways used in the HRA. Noted, specific reference to these key pressures has been added to the high-level environmental assessment in Section 8.1 of the SEA ER.
Joint Nature Conservation Committee	JNCC expect any route development to take full account of the mitigation hierarchy with a starting position that designated sites should avoided in the first instance. If this is not possible then all efforts should be made to avoid features within the sites as a priority. Following that, mitigation measures are to be used to reduce the impacts	Noted, this has been included in the general mitigation in Section 10.1.1 of the SEA ER.



Respondent	Comment	Response or Action
	on designated features as much as possible.	
Joint Nature Conservation Committee	JNCC broadly agrees with the objective principles for biodiversity flora and fauna (BFF). We look forward to reviewing the MCZ and HRA assessments to establish if these objectives are achievable through maintaining the conservation objectives of the offshore MPA network.	Noted. No action needed.
Joint Nature Conservation Committee	The indicators for BFF should also include PMF and Annex I habitats.	Noted, any PMFs and Annex I habitats that form qualifying interests of European sites or designated features of MCZs have been considered within the assessments. These are captured through the assessment of site-specific qualifying features, and therefore are inherently included within the assessments
		Table 26 in the SEA ER includes these as indicators (Status of protected and priority habitats and species (e.g., Annex habitats and species, priority habitats and species).
Joint Nature Conservation Committee	Ornithology specific comments In table 29 (page 285), disturbance or displacement is considered a pressure for 'Preconstruction, Construction and Decommissioning', but this pressure is not considered for 'Operation and Maintenance'. JNCC advise that the impact of any maintenance or survey vessels that may be required as part of the plan to also be considered in the assessment.	Noted. Disturbance associated with operation and maintenance activities, including vessel movements and survey works, has been considered within both the MCZ and HRA assessments. Noted, this has been added to the operational phase in the SEA ER.
Joint Nature Conservation Committee	Marine mammal specific comments Of the key issues identified for Biodiversity, Flora and Fauna in the HND Implementation Plan, listed on page 57, the ones we advise are of relevance to marine mammals are:	The HRA and MCZ has considered all these impact pathways where relevant. Noted, reference to these key sensitivities for marine mammals has been



Respondent	Comment	Response or Action
on Committee	• Potential for direct permanent loss of habitats and species, including protected or priority habitats and species, in the footprint of new onshore infrastructure and where cable protection materials are required for offshore cable routes. • Potential for construction and decommissioning phase damage or disturbance of offshore and onshore habitats and species, or indirect changes in habitat type post-construction e.g., through changes in sediment dynamics / smothering effects, effects on water quality / temperature or onshore soil quality through construction pollution, or cable protection materials. • Potential disturbance effects from visual presence, underwater sound and vibration on marine mammals, reptiles, fish and seabirds during offshore pre-construction, construction and decommissioning phases. Potential disturbance effects from visual presence and noise on terrestrial mammals and birds during onshore construction and maintenance activities. • Potential collision risk for marine mammals, fish, seabirds (above and below the water surface), and other marine fauna with vessels during the construction and decommissioning phases, and during cable maintenance activities. Potential for collision risk for mammals and birds with vehicles during the construction of onshore infrastructure.	added to the baseline description for marine mammals Section 3.2.1.5 of the SEA ER.
Joint Nature Conservati	For impacts 2, 5 and 6 above, it is unlikely that these will result in an AEoSI owing to the effects being highly localised (as well as impacts 5 & 6 being of a temporary nature) as marine mammals are wide-ranging species, with these	Noted. No action needed.



Respondent	Comment	Response or Action
on Committee	impacts affecting only a small area of their habitat. Even where cables cannot be buried and rock placement is required (as stated in Section 5.1.6) when within a designated marine mammal site, the seabed impact would only cover a very small area relative to the size of the site, and so an AEoSI is unlikely.	
Joint Nature Conservation Committee	The primary impact on marine mammals would be that of underwater sound, from geophysical surveys prior to cable burial and UXO clearance (where required). Project-level assessments should therefore consider the impacts from this, with noise modelling conducted to determine the range at which marine mammals could potentially experience auditory injury.	Noted, this has been added to the mitigation for effects of noise on marine mammals in Table 40 in the SEA ER.
Joint Nature Conservation Committee	Table 28 (pg. 270) summarises the strategic level effects of offshore cabling at pre-construction, construction and decommissioning stages for marine mammals, with these effects being: • Collision risk • Underwater noise from geophysical surveys and UXO clearance • Disturbance or displacement • Sediment disturbance Therefore, at the project level, JNCC would expect to see mitigation measures including: • Collision risk – a vessel management plan, including a commitment to slower speeds and following regular routes wherever possible. • Underwater noise from geophysical surveys and UXO	Noted, these points have been added/expanded in the mitigation in Table 40 of the SEA ER.



Respondent	Comment	Response or Action
	clearance – a Marine Mammal Mitigation Plan (MMMP), on which JNCC should be consulted, including a commitment to adhering to the relevant JNCC Marine Mammal Mitigation guidelines. • Disturbance or displacement – timing surveys and operations to avoid sensitive periods. For example, avoiding the relevant area of the Southern North Sea SAC during periods of peak harbour porpoise abundance. • Sediment disturbance – owing to its localised and temporary nature, and the fact that cetaceans primarily hunt and communicate using sound, JNCC anticipate that impacts from this would be negligible.	
Joint Nature Conservation Committee	At the operation and maintenance phase, the strategic effects stated are noise & cable vibrations, and electromagnetic fields (EMF). JNCC do not anticipate these resulting in significant negative impacts owing to their localised nature.	Noted. No action needed.
Joint Nature Conservation Committee	The Environmental assessment of the recommended design, as detailed in Section 9, shows that for all bar one of the recommended designs (the HND FUE INTOG being the exception), at least one, if not more, harbour porpoise SACs shall be affected either by a cable corridor running through the site, or close enough to the site to potentially result in disturbance. In each design, at least one site is unavoidable from a cable corridor. Therefore, as is stated in Section 9.2 there is the potential for cumulative and in-combination negative effects within designated sites that cannot be avoided by two or more identified route corridors. The are	Noted, the spatial assessment has been expanded in Section 9.2.1 of the SEA ER and recommendations for coordination brought through to the mitigation in Section 10.1. The recommended mitigation has been included in Table 40.



Respondent	Comment	Response or Action
	also areas where independent projects could interact with the cable corridors, leading to in combination/cumulative negative effects, which we agree would need to be considered at the individual project planning and design stages. Where there is the potential for cumulative short-term negative effects on harbour porpoise within designated sites, we advise that not only are the JNCC guidelines adhered to, but the individual developers liaise with other operators to coordinate noisy activities wherever possible, and ensure that the 20% daily noise threshold (as described in JNCC, 2020) is not breached. Developers should, where possible, avoid noisy operations during the seasonal period of greater harbour porpoise abundance in the relevant SACs, when noise disturbance management applies.	
Joint Nature Conservation Committee	Section 10 (Mitigation & Monitoring) details the mitigation measures that shall be taken. The primary measure is to avoid impacts where possible, which is our preferred mitigation method, with other measures to minimise impacts where necessary. We further agree with the primary SEA mitigation measure recommendation that the predicted negative effects on the environment be considered during the next stages of project design, and for further appropriate assessment at the project level.	Noted. No action needed.
Joint Nature Conservation Committee	Section 10.1.1 states that, "Data gathering for baseline characterisation will consist of a desk based study using existing dataset gathering to assess population abundance and density for marine mammals." We recommend here that a number of datasets are used to assess the baseline, including, but not limited to, SCANS IV surveys, the Marine	Noted. No action needed.



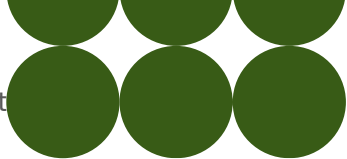
Respondent	Comment	Response or Action
	Mammal Management Units, and previous surveys (see The Joint Cetacean Data Programme) in the relevant areas.	
Joint Nature Conservation Committee	There is a commitment to abide by the Joint Position Statement from the UK Government regarding the use of low-noise UXO clearance methods over high-order detonation. Whilst we strongly agree with low order being the preference, we would recommend that avoidance of the device is prioritised over clearance, and that UXO clearance is applied for in separate marine licences as opposed to being included in DCOs. Should high-order techniques be used, there must be clear and strong justification for doing so. It has also been stated that the JNCC (2025) marine mammal mitigation guidelines for UXO clearance be followed, with Passive Acoustic Monitoring (PAM) and Acoustic Deterrent Devices (ADDs) be used where necessary. We therefore request that where PAM is used, the JNCC guidelines for the use of PAM (JNCC 2023) are followed.	Noted, this has been added to the mitigation in Table 40 of the SEA ER.
Joint Nature Conservation Committee	Table 40 proposes the mitigation measure for noise impacts on species of using alternatives to seismic surveys, for example marine vibroisolation and optimising the airgun design to attenuate high frequencies. Given that a number of cable corridors pass through harbour porpoise (which are a high frequency species) SACs, JNCC strongly agree with this measure and recommend that it is done wherever possible.	Noted. No action needed.
Joint Nature Conservation Committee	Table 40 also details the mitigation measures against collision risk. We advise that the use of vessel speed limits will be an effective measure against this potential impact. We advise that the proposed use of ADDs to mitigate for	Noted. No action needed.



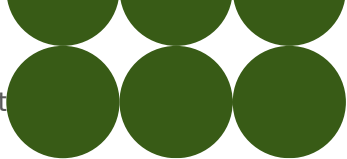
Respondent	Comment	Response or Action
on Committee	collision risk is unnecessary. Whilst ADDs may be effective for mitigating against auditory injury effects, they should not be used unless necessary, in order to avoid introducing additional noise into the environment.	
Joint Nature Conservation Committee	Section 10.1.3 details mitigation measures at the plan-level and the project-level. At the plan level, there is a legal requirement for all projects to undergo HRA, and AA where appropriate. Beyond this, mitigation measures, for example micro-routing to avoid sites, can be applied. As mentioned above, JNCC highly recommend site avoidance wherever possible as this will have the greatest impact of minimising adverse effects on sites. At the project-level, further HRAs (and AAs where required) can be undertaken wherever Likely Significant Effect cannot be excluded for a site. Further measures that JNCC recommend include the production of a MMMP (on which JNCC should be consulted), to be submitted alongside the DCO, and include, as a minimum, a commitment to adhere to the JNCC Marine Mammal Mitigation guidelines. Additional measures, detailed in Table 41, include the use of trenchless where possible, to mitigate against changes in prey availability, regardless of the percentage of any designated sites that may be affected by this impact, and vessels complying with the with International Regulations for Preventing Collisions at Sea 1972, as well as reducing the vessel speed and the number of vessels to as few as practically possible. JNCC agree that all of the above are suitable measures to follow to reduce adverse impacts.	This section and Table 41 in the SEA ER is taken from the RIAA. This section and table have been updated following review and update of the RIAA by AECOM. As this expands mitigation for the HRA, a separate Table 42 has been added in the SEA ER to outline the mitigation set out in the MCZ report.



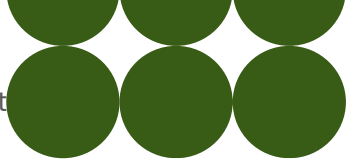
Respondent	Comment	Response or Action
Joint Nature Conservation Committee	JNCC wishes to remind the regulator that each competent authority is under a statutory duty to have due regard to the advice of the SNCBs.	We endeavour to apply the lessons learned from these processes to subsequent strategic energy plans; we will ensure that the insights gained are carried forward to maximise the value of the collective efforts of all agencies involved. NESO will consider for future consultation.
Joint Nature Conservation Committee	Sufficient notice of consultation and overlapping consultations and timescale to allow statutory advisors to plan resources would be welcomed.	We appreciate the importance of integrating simultaneous strategic planning mechanisms for energy generation and transmission. We have noted this request and will endeavour to organise consultations as efficiently as possible. Our aim is to align plans, timescales, and feedback windows where possible to ensure that your advice can effectively contribute to interconnected strategic planning initiatives, such as the SSEP and the CSNP, along with their associated SEA processes. Your input is invaluable, and we are committed to facilitating a collaborative and coordinated approach where possible.
Joint Nature Conservation Committee	Clarity on how consultation feedback has been addressed and incorporated into the NESO documentation should be transparent and clear and provided by the NESO teams to allow advisors to fully understand where our advice has been considered and if it has been incorporated. This consultation has been time consuming as we have needed to go back over previous consultations and responses to understand how our advice has been used.	We understand and appreciate the time and effort invested in reviewing this and previous consultations. To address this we have published a feedback summary response document which covers the main themes raised as part of the consultation and some more detailed questions posed. We are continuing to incorporate learnings from this consultation across SEP and how we can better respond to feedback across other plans such as SSEP and CSNP.
Joint Nature Conservation Committee	A tabulated approach to this with explicit locations for where advice has been adopted or justification if not would be very helpful for audit purposes.	Noted. We understand and appreciate the time and effort invested in reviewing this and previous consultations. To address this we have published a feedback summary response document which covers the main themes raised as part of the consultation and some more detailed questions posed. Although a tabulated response for all comments received is not considered feasible for the HND assessments, we are



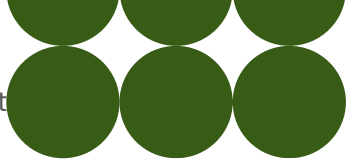
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		continuing to incorporate learnings from this consultation across SEP and how we can better respond to feedback across other plans such as SSEP and CSNP.
Joint Nature Conservation Committee	The proposed route requires two cable crossings inside the MPA which includes 18,800m2 permanent habitat loss from rock protection (crossings and protection) and 700,000 m² temporary seabed disturbance during installation and potentially further deposits for maintenance and decommissioning which have not been included. The EGM MPA is currently not meeting conservation objectives due to existing human pressures.	Responses to each point: • JNCCs concern regarding the use of the term 'unavoidable' is noted. At Plan level a range of strategic routing options were considered, including routes that would avoid the East of Gannet and Montrose Fields NCMPA. These alternatives were assessed in terms of engineering feasibility, seabed constraints, interaction with existing infrastructure, and the resulting extent of seabed disturbance. Options avoiding the NCMPA would require substantially longer cable lengths and additional seabed crossings, resulting in a greater overall footprint of environmental effects. On this basis, the selected corridor is considered to represent the option with the lowest overall environmental impact at Plan level. Text has been updated to clarify this in MCZ Stage 2 section INTOG. • Noted. The mitigation hierarchy has been followed in the development and assessment of the study corridor and is detailed in Stage 1 MCZ assessment. The hierarchy has been applied at the appropriate stage for Plan-level assessment, with strategic alternatives considered during corridor identification. Further application of the mitigation hierarchy through project-specific design and micro-siting will be undertaken by developers at project level. • Regarding the permanent habitat loss figure, our assessment calculated 15,000 m² based on conservative assumptions of 750 m length and 10 m width of cable protection at each of two crossings. We note JNCC's figure of 18,800 m² and would welcome clarification on the assumptions underpinning this calculation to understand the difference. The MCZ assessment focuses on permanent habitat loss as this is most relevant to



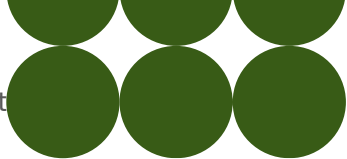
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		long-term conservation objectives and site integrity. Temporary seabed disturbance during installation is considered reversible, particularly for the subtidal sands and gravels habitat that dominates the likely crossing locations, which demonstrates high recoverability due to natural sediment dynamics. At Plan level, the extent and frequency of future maintenance or decommissioning activities cannot be quantified and would be subject to project-level assessment. When considered in the context of the MPA extent (1,839,000,000 m²) and the dynamic, recoverable nature of the affected habitat, the permanent footprint is not expected to hinder conservation objectives • JNCC advises a 'recover' objective for ocean quahog and deep-sea muds, including their supporting sands and gravels. It is acknowledged that ocean quahog and deep-sea mud habitats within the East of Gannet and Montrose Fields NCMPA are subject to recover conservation objectives. The MCZ assessment has considered this context and assessed whether the proposed activities would materially affect the ability of these features to recover towards favourable condition at the site scale. Text has been updated to consider this in MCZ Stage 2 section INTOG. • Noted and agreed that pressures on protected features should be reduced where practicable. At Plan level, the selected corridor minimises additional pressure through reduced cable length, fewer crossings and constrained permanent footprint. Opportunities for further pressure reduction would be explored through project-level design, installation methods and mitigation measures. • Noted regarding the advice that the proposed cable corridor could hinder the conservation aims of the East of Gannet and Montrose Fields NCMPA and their recommendation that alternatives be considered prior to any consideration of derogation. The Plan has considered alternative routing options at Plan level, including



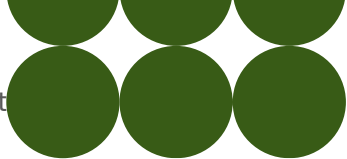
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		options that would avoid the NCMPA. These alternatives were assessed in terms of engineering feasibility, interaction with existing seabed infrastructure, and the overall extent of seabed disturbance. At Plan level, these options were not considered to offer an environmentally preferable outcome, as they would result in substantially longer cable lengths, additional seabed crossings and a greater footprint of disturbance, potentially increasing effects on the wider National Site Network. Based on the evidence available at Plan level, we do not consider that the proposed corridor is likely to significantly hinder the achievement of the conservation objectives of the MPA. The assessment concludes that permanent habitat loss would be highly localised in extent, that temporary disturbance would be reversible, and that affected habitats are expected to recover, such that the ability of protected features to recover towards favourable condition at the site scale would not be materially affected. It is recognised that the current limitations associated with like-for-like compensation measures for ocean quahog and deep-sea mud habitats. However, as the Plan-level MCZ assessment does not conclude significant hindrance to the conservation objectives, consideration of derogation and associated compensatory measures is not required at this stage. Further refinement of design, mitigation and, if necessary, alternative approaches would be undertaken at project level where sufficient detail is available. • JNCC’s recommendation that Stage 2 MCZ assessments should provide early visibility of consenting risk and the potential role of mitigation, enhancement and biodiversity measures (MEEB) is noted. At Plan level, the Stage 2 assessment has considered avoidance and minimisation of impacts through strategic routing, reduction in cable length and number of crossings, and assumptions regarding micro-siting and installation methods. On the basis of this assessment, the proposal is not expected to significantly hinder the conservation objectives of the East of Gannet and Montrose Fields NCMPA.



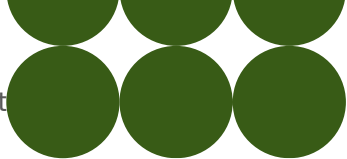
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		As significant hindrance has not been identified, consideration of MEEB is not triggered at this stage. Furthermore, the identification of specific MEEB, technological solutions or design commitments would be speculative at Plan level due to the absence of project-specific design information. The Scottish library of measures and appropriateness of any mitigation, enhancement or compensation measures will be considered at project level should future assessments identify a requirement to do so.
Joint Nature Conservation Committee	• JNCC advises a 'recover' objective for ocean quahog and deep-sea muds, including their supporting sands and gravels. • All industrial activities should reduce or remove pressures to move toward favourable status. • JNCC advise the cable corridor will hinder the MPA's conservation aims and request NESO consider available alternatives and to update the plan accordingly prior to considering derogation, especially as there is currently no effective like for like compensation measures available within the Scottish library of measures for ocean quahog and deep-sea mud habitat loss.	Responses to each point: • JNCCs concern regarding the use of the term 'unavoidable' is noted. At Plan level a range of strategic routing options were considered, including routes that would avoid the East of Gannet and Montrose Fields NCMPA. These alternatives were assessed in terms of engineering feasibility, seabed constraints, interaction with existing infrastructure, and the resulting extent of seabed disturbance. Options avoiding the NCMPA would require substantially longer cable lengths and additional seabed crossings, resulting in a greater overall footprint of environmental effects. On this basis, the selected corridor is considered to represent the option with the lowest overall environmental impact at Plan level. Text has been updated to clarify this in MCZ Stage 2 section INTOG. • Noted. The mitigation hierarchy has been followed in the development and assessment of the study corridor and is detailed in Stage 1 MCZ assessment. The hierarchy has been applied at the appropriate stage for Plan-level assessment, with strategic alternatives considered during corridor identification. Further application of the mitigation hierarchy through project-specific design and micro-siting will be undertaken by developers at project level. • Regarding the permanent habitat loss figure, our assessment calculated 15,000 m² based on conservative assumptions of 750 m length and 10 m



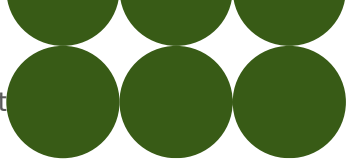
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		width of cable protection at each of two crossings. We note JNCC's figure of 18,800 m² and would welcome clarification on the assumptions underpinning this calculation to understand the difference. The MCZ assessment focuses on permanent habitat loss as this is most relevant to long-term conservation objectives and site integrity. Temporary seabed disturbance during installation is considered reversible, particularly for the subtidal sands and gravels habitat that dominates the likely crossing locations, which demonstrates high recoverability due to natural sediment dynamics. At Plan level, the extent and frequency of future maintenance or decommissioning activities cannot be quantified and would be subject to project-level assessment. When considered in the context of the MPA extent (1,839,000,000 m²) and the dynamic, recoverable nature of the affected habitat, the permanent footprint is not expected to hinder conservation objectives • JNCC advises a 'recover' objective for ocean quahog and deep-sea muds, including their supporting sands and gravels. It is acknowledged that ocean quahog and deep-sea mud habitats within the East of Gannet and Montrose Fields NCMPA are subject to recover conservation objectives. The MCZ assessment has considered this context and assessed whether the proposed activities would materially affect the ability of these features to recover towards favourable condition at the site scale. Text has been updated to consider this in MCZ Stage 2 section INTOG. • Noted and agreed that pressures on protected features should be reduced where practicable. At Plan level, the selected corridor minimises additional pressure through reduced cable length, fewer crossings and constrained permanent footprint. Opportunities for further pressure reduction would be explored through project-level design, installation methods and mitigation measures. • Noted regarding the advice that the proposed cable corridor could



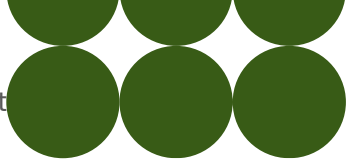
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		hinder the conservation aims of the East of Gannet and Montrose Fields NCMPA and their recommendation that alternatives be considered prior to any consideration of derogation. The Plan has considered alternative routing options at Plan level, including options that would avoid the NCMPA. These alternatives were assessed in terms of engineering feasibility, interaction with existing seabed infrastructure, and the overall extent of seabed disturbance. At Plan level, these options were not considered to offer an environmentally preferable outcome, as they would result in substantially longer cable lengths, additional seabed crossings and a greater footprint of disturbance, potentially increasing effects on the wider National Site Network. Based on the evidence available at Plan level, we do not consider that the proposed corridor is likely to significantly hinder the achievement of the conservation objectives of the MPA. The assessment concludes that permanent habitat loss would be highly localised in extent, that temporary disturbance would be reversible, and that affected habitats are expected to recover, such that the ability of protected features to recover towards favourable condition at the site scale would not be materially affected. It is recognised that the current limitations associated with like-for-like compensation measures for ocean quahog and deep-sea mud habitats. However, as the Plan-level MCZ assessment does not conclude significant hindrance to the conservation objectives, consideration of derogation and associated compensatory measures is not required at this stage. Further refinement of design, mitigation and, if necessary, alternative approaches would be undertaken at project level where sufficient detail is available. • JNCC’s recommendation that Stage 2 MCZ assessments should provide early visibility of consenting risk and the potential role of mitigation, enhancement and biodiversity measures (MEEB) is noted. At Plan level, the Stage 2 assessment has considered avoidance and minimisation of impacts through strategic routing, reduction in cable length and number



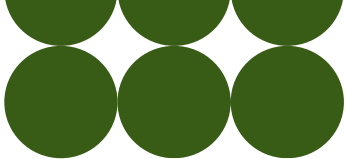
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		of crossings, and assumptions regarding micro-siting and installation methods. On the basis of this assessment, the proposal is not expected to significantly hinder the conservation objectives of the East of Gannet and Montrose Fields NCMPA. As significant hindrance has not been identified, consideration of MEEB is not triggered at this stage. Furthermore, the identification of specific MEEB, technological solutions or design commitments would be speculative at Plan level due to the absence of project-specific design information. The Scottish library of measures and appropriateness of any mitigation, enhancement or compensation measures will be considered at project level should future assessments identify a requirement to do so.
Joint Nature Conservation Committee	The Stage 2 assessment should consider the MEEB required at plan level, to allow developers an understanding of the consenting risk and design change requirements, commitments or technological advances or MEEB they could apply to avoid impacts to the MPA. JNCC recommend that NESO consider the library of measures for suitable MEEB available for development within Scottish offshore waters.	Responses to each point: • JNCCs concern regarding the use of the term 'unavoidable' is noted. At Plan level a range of strategic routing options were considered, including routes that would avoid the East of Gannet and Montrose Fields NCMPA. These alternatives were assessed in terms of engineering feasibility, seabed constraints, interaction with existing infrastructure, and the resulting extent of seabed disturbance. Options avoiding the NCMPA would require substantially longer cable lengths and additional seabed crossings, resulting in a greater overall footprint of environmental effects. On this basis, the selected corridor is considered to represent the option with the lowest overall environmental impact at Plan level. Text has been updated to clarify this in MCZ Stage 2 section INTOG. • Noted. The mitigation hierarchy has been followed in the development and assessment of the study corridor and is detailed in Stage 1 MCZ assessment. The hierarchy has been applied at the appropriate stage for Plan-level assessment, with strategic alternatives considered during corridor identification. Further application of the mitigation hierarchy through



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		early visibility of consenting risk and the potential role of mitigation, enhancement and biodiversity measures (MEEB) is noted. At Plan level, the Stage 2 assessment has considered avoidance and minimisation of impacts through strategic routing, reduction in cable length and number of crossings, and assumptions regarding micro-siting and installation methods. On the basis of this assessment, the proposal is not expected to significantly hinder the conservation objectives of the East of Gannet and Montrose Fields NCMPA. As significant hindrance has not been identified, consideration of MEEB is not triggered at this stage. Furthermore, the identification of specific MEEB, technological solutions or design commitments would be speculative at Plan level due to the absence of project-specific design information. The Scottish library of measures and appropriateness of any mitigation, enhancement or compensation measures will be considered at project level should future assessments identify a requirement to do so.

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National Energy System Operator
Faraday House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

www.neso.energy