Spiorad na Mara Offshore Wind Farm

Offshore Project

Environmental Impact Assessment Report

Chapter 21: Commercial Fisheries, Volume 2a

Document Reference No.: SNM-SNM-PAC-CHP-1021

Date: February 2025

Quality Control Page

Document details	
Document title	Offshore Project Environmental Impact Assessment Report
Document subtitle	Chapter 21: Commercial Fisheries
Document reference no.	SNM-SNM-PAC-CHP-1021
Date	February 2026
Version	1.0
Author	NiMa Consultants Limited
Client Name	Spiorad na Mara Ltd

Document history

Version	Revision	Issued	Checked	Approved	Date	Comments
1.0	A	NiMa Consultants Limited	WSP	SnM Ltd	February 2026	Final for submission

Contents

List of Tables

List of Plates

21 COMMERCIAL FISHERIES

21.1 INTRODUCTION

21.1.1.1 This chapter of the Environmental Impact Assessment Report (EIAR) presents the results of the assessment of the likely significant effects of the proposed Spiorad na Mara Offshore Wind Farm (hereafter referred to as the 'Offshore Project') with respect to Commercial Fisheries. Commercial Fisheries activity is understood as fishing activity legally undertaken where the catch is sold for taxable profit.

21.1.1.2 This chapter should be read in conjunction with the project description provided in **Chapter 3: Project Description, Volume 1a** and the relevant parts of the following chapters and appendices:

- **Chapter 6: Socio-Economics, Volume 2a** where impacts on socio-economics of the local community is assessed;
- **Chapter 11: Benthic and Intertidal Ecology, Volume 2a** where impacts on the ecology of shellfish, including species of commercial interest, are assessed;
- **Chapter 12: Fish Ecology, Volume 2a** where impacts on the ecology of fish, including species of commercial interest, are assessed;
- **Chapter 16: Shipping and Navigation, Volume 2a** where impacts on the navigational safety aspects of fishing activity are assessed;
- **Chapter 20: Other Sea Users and Recreation, Volume 2a** where impacts on other users including charter angling and aquaculture are assessed;
- **Appendix 16.1: Navigation Risk Assessment, Volume 2c** details a risk assessment of hazards to all vessels in transit, including fishing vessels;
- **Outline Navigational Safety and Vessel Management Plan, Volume 3** details navigational safety measures and details relating to the coordination of Offshore Project vessels including indicative transit routes;
- **Outline Lighting and Marking Plan, Volume 3** which includes Aids to Navigation Management Plan;
- **Outline Offshore Environmental Management Plan, Volume 3** details a structured approach to environmental management and compliance in the marine environment throughout the construction phase of the Offshore Project;
- **Marine Pollution Contingency Plan, Volume 3** provides mitigation measures to mitigate against pollution incidents;
- **Invasive Non-Native Species Mitigation Plan, Volume 3** provides measures to prevent and manage INNS including the treatment of vessels to minimise the spread of INNS;
- **Outline Offshore Operation and Maintenance Plan, Volume 3** provides the overarching framework for environmental management during the Operation and Maintenance (O&M) phase of the Offshore Project.

21.1.1.3 This technical chapter describes the following:

- Legislation, planning policy and other documentation that has informed the assessment (Section 21.2 and **Chapter 2: Policy and Legislative Context, Volume 1a**);
- Outcome of consultation and engagement that has been undertaken to date, including how matters relating to commercial fisheries have been addressed (Section 21.3);
- Scope of the assessment for commercial fisheries (Section 21.3.3);
- The methods of assessment used for baseline data gathering and impact assessment (Section 21.5);
- Overall baseline (Section 21.6);
- Embedded environmental measures relevant to commercial fisheries and the relevant maximum design scenario (Section 21.7);
- Assessment of commercial fisheries likely significant effects and further mitigation (Section 21.8 21.10);
- Assessment of Commercial Fisheries Combined effects (Section 21.11);
- Assessment of Commercial Fisheries Whole Project effects (Section 21.12);
- Assessment of Commercial Fisheries Cumulative effects (Section 21.12);
- Assessment of Transboundary effects (Section 21.14)
- A summary of residual effects for commercial fisheries (Section 21.15);
- Glossary and abbreviations used in the Commercial Fisheries assessment (Section 21.16: Glossary of terms and abbreviations);
- Information sources and documentation referred to in this chapter (Section 21.1).

21.1.1.4 The chapter is supported by the following appendices:

- **Appendix 21.1: Commercial Fisheries Technical Report, Volume 2c** where an extended baseline of Commercial Fisheries is provided;
- **Fisheries Mitigation, Monitoring and Communication Plan, Volume 3** which describes the mitigation, monitoring and communication that will be put in place to avoid or minimise the adverse effects of a project on Commercial Fisheries;

21.1.1.5 This chapter includes a summary of information contained in **Appendix 21.1, Volume 2c**. The appendix provides a detailed characterisation of the Commercial Fisheries baseline.

21.1.1.6 The chapter is supported by the following figures:

- **Figure 21-1: Commercial fisheries local and regional Study Areas, Volume 2b;**
- **Figure 21-2: Fishing Effort (Hours) for Potting Based on FiSMaDiM Data (Cumulative 2012-2021) (data source: FiSMaDiM, 2025), Volume 2b;**
- **Figure 21-3: Fishing Effort (Hours) for Demersal Trawl Based on FiSMaDiM Data (Cumulative 2012-2021) (data source: FiSMaDiM, 2025), Volume 2b;**
- **Figure 21-4: Fishing Effort (Hours) for Pelagic Trawl Based on FiSMaDiM Data (Cumulative 2012-2021) (data source: FiSMaDiM, 2025), Volume 2b;**

- **Figure 21-5: Design change to OCAS in response to inshore fishing grounds with the revised OCAS shown in red, Volume 2b;**
- **Figure 21-6: Mapping of inshore fishing grounds that has driven the design change to the OCAS, Volume 2b;**
- **Figure 21-7: Commercial Fisheries Cumulative Effects Assessment, Volume 2b.**

21.2 SUMMARY OF POLICY AND LEGISLATIVE CONTEXT

21.2.1.1 This section outlines the legislation, policy and guidance that is relevant to the assessment of likely significant effects on Commercial Fisheries associated with the Construction, O&M and Decommissioning of the Offshore Project. In addition, other national, regional, and local policies are considered within this assessment where they are judged to be relevant. Further information on policies relevant to the Environmental Impact Assessment (EIA) is provided in **Chapter 2, Volume 1a**.

21.2.1.2 A summary of the legislative and policy relevant to Commercial Fisheries is provided in **Table 21-1**.

Table 21-1: Legislation and policy relevant to Commercial Fisheries assessment

Title	Summary	Response/where this is addressed in the EIAR
Marine (Scotland) Act 2010	Marine planning, Marine Protected Areas (MPAs), regulation of fishing activities for conservation.	Additional MPA management is considered in the potential cumulative impacts on Commercial Fisheries in Section 21.12.
Sea Fisheries (Scotland) Act 2003	Enforcement of sea fisheries law; supports implementation of national and international obligations.	All applicable fisheries legislation is considered to form an integral part of the regulatory and operational baseline under which commercial fisheries operate. These legislative instruments define the spatial and temporal parameters, gear types, effort limitations, and conservation measures that govern fishing activity. As such, they are inherently embedded in the baseline characterisation of commercial fisheries. The Commercial Fisheries baseline is summarised in Section 21.6 with further details provided in **Appendix 21.1, Volume 2c**.
Sea Fish (Conservation) Act 1967	Licensing of vessels; conservation measures such as mesh size, catch limits, and effort control.	
The Sea Fishing (Licences and Notices) (Scotland) Regulations 2011	Licensing conditions including seasonal closures, quota management, and gear regulations.	
Inshore Fishing (Scotland) Act 1984	Regulates fishing within 6 nm: gear restrictions, seasonal/area closures.	
The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004	Prohibits specified methods (e.g. trawl or dredge) in sensitive inshore areas to protect stocks and habitats.	

Title	Summary	Response/where this is addressed in the EIAR
The Sandeel (Prohibition of Fishing) (Scotland) Order 2024	Prohibits sandeel fishing in Scottish waters to protect ecosystem function and food-web integrity (e.g. for seabirds and marine mammals).	
Aquaculture and Fisheries (Scotland) Act 2007	Enforcement tools to combat illegal, unreported, and unregulated (IUU) fishing.	
Fisheries Act 2020	Provides for Fisheries Management Plans (FMPs), Joint Fisheries Statement (JFS), and sustainability objectives post-Brexit.	
Climate Change (Scotland) Act 2009 (indirect)	Requires climate adaptation reporting, including from the fisheries sector.	
Draft Sectoral Marine Plan (Scottish Government, 2025)	Highlights the need to balance fisheries and offshore wind through continued dialogue and strategic planning, including assessing cumulative impacts, addressing short-term disruption, and supporting coexistence via measures like retraining and a fisheries fund. At the project level, it calls for early engagement with fishers, low-impact infrastructure choices, careful array design, and safe cable installation to minimise risks and maintain fishing activity.	Principles integrated through detailed baseline characterisation of commercial fishing activity, early and continued consultation, which has directly informed the Offshore Project development. In addition, the Offshore Project has committed to additional mitigation including disruption agreements, alongside measures such as early communication of construction activities and monitoring pre-, during and post-construction.
Sectoral Marine Plan (SMP) for Offshore Wind Energy (Scottish Government, 2020)	Identifies plan option areas for offshore wind farm (OWF) development and identifies key consenting issues associated with development. Potential impacts on commercial fishing are identified as a key risk factor to development in West Region plan option areas.	Reflecting the key risk factors identified in the West Region Plan Option areas, this chapter presents an assessment of potential impacts on Commercial Fisheries in Sections 21.8 to 21.10.
Scottish National Marine Plan (NMP) (Scottish Government, 2015) [Note that consultation on	Contains sector-specific policies relevant to offshore wind and commercial fisheries. Policies	Reflecting the key concerns and issues that should be addressed

Title	Summary	Response/where this is addressed in the EIAR
the draft NMP2 is expected in 2025/2026]	under Chapter 6: Sea Fisheries ('FISHERIES 1 – 5') are considered relevant to commercial fisheries. Policies seek to safeguard existing fishing opportunities and activities wherever possible and advise that mechanisms for managing conflicts between the fishing sector and other users of the marine environment should be in place. Preparation of a Fisheries Management and Mitigation Strategy (FMMS) (*to now be termed Fisheries Mitigation Monitoring and Communication Plan (FMMCP)*) is recommended where existing fishing opportunities and activity cannot be safeguarded.	in an impact assessment and FMMCP, the EIAR: • Assesses the potential impacts of the Offshore Project on Commercial Fisheries in Sections 21.8 to 21.10; • Sets out measures to mitigate any constraints that the Offshore Project may place on commercial fishing activity in Sections 21.7, and 21.8 to 21.10.
United Kingdom (UK) Marine Policy Statement (MPS) (HM Government, 2011)	Explicitly expresses support for the fishing sector, and with regard to displacement, advocates "seeking solutions such as co-location of activity wherever possible". Specifically, paragraphs 3.8.1, 3.8.2, and 2.3.1.5 stipulate that the process of marine planning should "enable the co-existence of compatible activities wherever possible" and supports the reduction of real and potential conflict as well as maximising compatibility and encouraging co-existence of activities.	Reflecting the desire for co-existence of activities in the marine environment, this chapter presents an assessment of potential impacts on Commercial Fisheries in Sections 21.8 to 21.10 and identifies measures to encourage co-existence in Sections 21.7 and Sections 21.8 to 21.10.

21.2.1.3 The following guidance is directly applicable to Commercial Fisheries and has been considered within this chapter.

- Good Practice Guidance for assessing fisheries displacement by other licensed marine activities (Scottish Government, 2022);
- Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments (United Kingdom Fisheries Economic Network and Seafish, 2012);

- Fisheries Liaison with Offshore Wind and Wet Renewables group (FLOWW) Recommendations for Fisheries Liaison: Best Practice guidance for offshore renewable developers (FLOWW, 2014 and noted to be currently in the process of being updated);
- FLOWW Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Disruption Settlements and Community Funds (FLOWW, 2015);
- Options and opportunities for marine fisheries mitigation associated with wind farms (Blyth-Skyrme, 2010a);
- Developing guidance on fisheries Cumulative Impact Assessment for wind farm developers (Blyth-Skyrme, 2010b);
- Guidelines for data acquisition to support marine environmental assessments of offshore renewable energy projects. Contract report: ME5403 (Centre for Environment Fisheries and Aquaculture Science (Cefas), 2012);
- Guidelines for liaison with the fishing industry on the United Kingdom Continental Shelf (UKCS) – Issue 8 (Offshore Energies UK, 2023);
- Fishing and Submarine Cables - Working Together (International Cable Protection Committee, 2009);
- European Subsea Cables Association (ESCA) Guideline 01 and Appendices (ESCA, 2018);
- Guidance on preparing a Fisheries Management and Mitigation Strategy (Draft) (Marine Scotland, 2020) – withdrawn in 2024, to be replaced by new guidance on preparing a Fisheries Mitigation Monitoring and Communication Plan (publication expected 2024).

21.3 SCOPING AND CONSULTATION

21.3.1 OVERVIEW

21.3.1.1 This section describes the stakeholder engagement undertaken for the Offshore Project. This consists of early engagement, the outcome of, and response to, the Scoping Opinion in relation to the Commercial Fisheries assessment, informal consultation and consultation undertaken though the Preliminary Application Consultation (PAC) process (hereafter referred to as the 'formal consultation'). An overview of stakeholder engagement for the Offshore Project can be found in **Chapter 5: Approach to EIA, Volume 1a** and **Appendix 5.4: Stakeholder Consultation and Engagement, Volume 1c**.

21.3.1.2 Commercial Fisheries engagement specific to the approach to and outcomes of EIA is described in this chapter. Spiorad na Mara Limited (hereafter referred to as 'the Applicant') has appointed a Company Fisheries Liaison Officer (CFLO) and a Fishing Industry Representative (FIR) who have regularly engaged with local fisheries stakeholders and individual fishers, primarily to provide them with updates on Offshore Project, including site survey activities. The details of CFLO engagement are not captured in the chapter unless considered relevant to impact assessment. Feedback from

the CFLO has informed the development of the Commercial Fisheries baseline in **Appendix 21.1, Volume 2c**.

21.3.1.3 Consultation is a key feature of the EIA process and continues throughout the lifecycle of the Offshore Project, from the initial stages through to consent and post consent.

21.3.1.4 Consultation captures all consultation and engagement and has been ongoing with a number of prescribed and non-prescribed consultation bodies and local authorities in relation Commercial Fisheries. All consultation to date has been undertaken in line with the process described in **Chapter 5, Volume 1a** and **Appendix 5.4, Volume 1c**. Feedback received during this process has been incorporated into the EIAR wherever possible as appropriate.

21.3.2 EARLY ENGAGEMENT

21.3.2.1 Early engagement was undertaken with a stakeholder in relation to Commercial Fisheries. This engagement was undertaken to introduce the Offshore Project and the proposed approach to scoping the EIAR. In accordance with Marine Directorate - Licensing Operations Team (MD-LOT) guidance (Marine Scotland, 2024), the Applicant held formal scoping workshops in May and June 2023 and stakeholder engagement meetings to inform the Scoping Report. Further details of the consultation undertaken and the post-workshop feedback can be found in Section 5.3 and Table 5.3-1 of the Scoping Report.

Western Isles Fishermen's Association

21.3.2.2 In March 2023, Western Isles Fisherman's Association (WIFA) were consulted with. WIFA advised of key areas for Commercial Fisheries on the west coast of Lewis/*Eilean Leòdhais*, provided a recommendation for an appropriate FIR and highlighted the importance of engagement with the inshore fleet. In response, an FIR has been appointed by the Offshore Project and remains in post, supported by a CFLO. Consultation has been ongoing with the inshore fleet via the FIR, CFLO and directly.

Scoping Opinion

21.3.2.3 The Applicant submitted a Scoping Report (Spiorad na Mara, 2023) and request for a Scoping Opinion to Comhairle nan Eilean Siar (CnES) (Western Isles Council) and MD-LOT in September 2023. A Scoping Opinion was received in May 2024. The Scoping Report sets out the proposed Commercial Fisheries assessment methodologies, an outline of the baseline data collected to date and proposed to be used, and the scope of the assessment. The comments received in the Scoping Opinion and how these have been addressed in this EIAR is provided in **Appendix 5.2: Response to Scoping Opinion, Volume 1c**.

21.3.2.4 A summary of those responses relevant to Commercial Fisheries is shown in **Table 21-2**. Regard has also been given to other stakeholder comments that were received in relation to the Scoping Report.

Table 21-2: Scoping Opinion responses – Commercial Fisheries

Consultee	Date/Document	Comment	Response/where this is addressed in the EIAR
MD-LOT	May 2024/ Scoping Opinion	MD-LOT advise that consultation with commercial fishers should be carried out and that data from vessels under 10 m should be included to fill the data gap in the EIAR.	Inshore fishing grounds have been mapped based on stakeholder consultation, vessel plotter data and Automatic Identification System (AIS) analysis. Specifically see **Figure 21.6, Volume 2b**.
MD-LOT	May 2024/ Scoping Opinion	MD-LOT advise including rectangle 46E2 in the Study Area as it represents fishing grounds within close proximity to the Offshore Project.	ICES rectangle 46E2 has been included in the Study Area, as defined in Section 21.3.3.
MD-LOT	May 2024/ Scoping Opinion	MD-LOT recommended consideration of impact of increased steaming times to fishing grounds during operational phase.	Potential impacts of the Offshore Project on fishing vessel steaming times are assessed for all phases and assessment outcomes are presented in Sections 21.8 to 21.10.
MD-LOT	May 2024/ Scoping Opinion	MD-LOT advise potential impact of disruption to fishing activity, for example due to increased vessel traffic in the area, should be assessed.	Potential impacts on fishing activity associated with Offshore Project vessel traffic are assessed for all phases and assessment outcomes are presented in Sections 21.8 to 21.10.
MD-LOT	May 2024/ Scoping Opinion	The Applicant has instead scoped in the physical presence of infrastructure on the seabed post construction. As infrastructure has the potential to cause safety issues, the Scottish Ministers advise this impact is renamed to safety issues for fishing vessels for clarity.	Potential impacts of the 'physical presence of infrastructure leading to gear snagging' are assessed for all phases and assessment outcomes are presented in Sections 21.8 to 21.10.

Consultee	Date/Document	Comment	Response/where this is addressed in the EIAR
MD-LOT	May 2024/ Scoping Opinion	Scottish Ministers advise that the Applicant undertakes a fisheries displacement assessment in line with the Xodus 2022 "Good practice guidance for assessing fisheries displacement by other licensed marine activities".	The Xodus guidance, as cited in Section 21.2, has been applied in assessing potential displacement effects. Assessment outcomes are presented in Sections 21.8 to 21.10.
MD-LOT	May 2024/ Scoping Opinion	Scottish Ministers advise that the Applicant must adopt a clear position on whether it will be content for fishing to continue throughout the Offshore Project after construction is complete and whether overtrawl trials will be included as a mitigation measure. This position must be adopted prior to the fisheries displacement assessment so the implications from this can be included in the assessment.	The assessment assumes that fishing will resume around and between infrastructure within the Study Area where possible, with the exception of an assumed 50 m operating distance from infrastructure, areas of cable protection, and Safety Zones around infrastructure undergoing major maintenance or replacement. Furthermore, the individual decisions made by skippers with their own perception of risk will determine the likelihood of whether their fishing will resume within the Study Area. Baseline environment shows that no demersal trawling takes place within the Offshore Project boundaries due to ground conditions and therefore overtrawl surveys are considered unnecessary.
MD-LOT	May 2024/ Scoping Opinion	Both the SFF and Comhairle nan Eilean Siar representations on compensatory measures for fishing vessels should be considered in full.	The Offshore Project's strategy for mitigation to commercial fisheries is provided in full in **Fisheries Mitigation, Monitoring and Communication Plan, Volume 3.**
MD-LOT	May 2024/ Scoping Opinion	With regard to mitigation and monitoring, the Scottish Ministers direct the Applicant to the Comhairle nan Eilean Siar representation on restocking and stock enhancement	The Offshore Project's strategy for mitigation to commercial fisheries is provided in full in **Fisheries Mitigation, Monitoring and Communication Plan, Volume 3**.

Consultee	Date/Document	Comment	Response/where this is addressed in the EIAR
		programs that could be implemented to mitigate the loss of marine life and impacts to fishing activity.	
MD-LOT	May 2024/ Scoping Opinion	Scottish Ministers advise that both a FMMS and Vessel Management Plan (VMP) should be developed in consultation with the SFF and the fishing industry.	It is confirmed that the FMMCP (**Fisheries Mitigation, Monitoring and Communication Plan, Volume 3**) has been developed in consultation with SFF and the fishing industry. The Applicant has submitted and outline Navigation and Safety Vessel Management Plan (NSVMP) as part of the application, see **Outline Navigational Safety and Vessel Management Plan, Volume 3**.
MD-LOT	May 2024/ Scoping Opinion	The Scottish Ministers strongly recommend consultation with fishing industry while finalising design parameters for the Offshore Project. Comhairle nan Eilean Siar have provided recommended consultees to be included in the preliminary list of consultees presented in Table 6.9-4 of the Scoping Report.	The Fisheries Liaison Officer (FLO) and Fishing Industry Representative (FIR) have undertaken consultation with the fishing industry which has informed Study Area.
MD-LOT	May 2024/ Scoping Opinion	Scottish Ministers direct the Applicant to the Comhairle nan Eilean Siar in regard to the recommendations on monitoring of the impacts to salmon and sea trout within the Study Area, and monitoring of the potential impacts of Invasive and Non-Native Species (INNS) on the fishing industry and advise that this is fully considered in the EIAR.	Salmon, sea trout and INNS are considered in **Chapter 12, Volume 2a** and **Invasive Non-Native Species Mitigation Plan, Volume 3**.
MD-LOT	May 2024/ Scoping Opinion	With regard to the approach to cumulative effects assessment, as outlined in Section 4.4 of the Scoping Report, the Scottish Ministers advise that this takes into account any	The cumulative effects assessment (CEA) presented in Section 21.13 takes into account MPAs and fisheries management measures.

Consultee	Date/Document	Comment	Response/where this is addressed in the EIAR
		Marine Protected Areas (MPA) and other protected areas with fisheries management measures in place.	
Marine Directorate – Science, Evidence, Data and Digital (MD-SEDD)	May 2024 / Scoping Response	Several main points/themes as follows: • Advise consulting with fishing industry as Offshore Project design develops to encourage co-existence; • Baseline data unlikely to fully capture under 10 m fishing vessel activity; additional datasets highlighted. Other points are as per the MD-LOT Scoping Opinion feedback captured earlier in this table.	The FLO and FIR have undertaken consultation with the fishing industry and this has informed a design change to the Offshore Cable Area of Search (OCAS) (**Figure 21.5, Volume 2b**) and inshore fishing ground mapping (**Figure 21.6, Volume 2b**).
Comhairle nan Eilean Siar	May 2024 / Scoping Response	Several main points/themes as follows: • Fisheries restrictions in place in the Bragar to Dell Protected Area already limit fishing activity; • Baseline data unlikely to fully capture under 10 m fishing vessel activity; • Concern regarding cumulative effects and spatial squeeze with planned offshore wind and subsea cable developments; • Co-existence of fishing with the Offshore Project will be influenced by Project design and fishing method; • Impacts of the export cable and associated protection are of concern to the local fishing fleet; • The Array Area supports a highly important lobster and crab fishery; • Concerns about effects of invasive non-native marine species introduced by Offshore Project vessels; • Agree broadly with proposed commercial fisheries assessment approach;	These themes are addressed within the Baseline (Section 21.6) and Impact Assessment sections (Sections 21.8 to 21.10) of this chapter. Specifically: • Existing fisheries restrictions are noted as part of the regulatory and spatial context in **Appendix 21.1, Volume 2c**; • The limitations of baseline data, particularly regarding under 10 m vessel activity, are acknowledged with inshore fisheries mapping undertaken to address this data gap (**Figure 21.6, Volume 2b**); • Concerns about cumulative effects and spatial squeeze from other marine developments (e.g. offshore wind and subsea cables) are considered in the cumulative impact assessment, Section 21.13; • The influence of Offshore Project design and fishing method on co-existence is evaluated, with

Consultee	Date/Document	Comment	Response/where this is addressed in the EIAR
		• Agree broadly with embedded mitigation measures.	consideration given to different gear types and fishing practices in Sections 21.8 to 21.10; • Potential impacts from the Array Cable to Landfall, including cable protection measures, are assessed with specific relevance to the local fleet's operations in Sections 21.8 to 21.10; • The importance of the lobster and crab fishery is recognised and integrated into the assessment; • Risks associated with marine INNS introduced by Offshore Project vessels are considered under ecological and biosecurity pressures in **Chapter 12, Volume 2a**; • Broad agreement with the assessment approach and embedded mitigation is noted and aligned with the methodologies adopted.
SFF	May 2024/ Scoping Response	Several main points/themes as follows: • SFF provide feedback on their design preferences relating to foundation type, cable protection, boulder clearance and decommissioning approaches; • Agree with baseline data sources used to define commercial fisheries baseline but these should be validated through engagement with the fishing industry; Request an FMMS is developed pre-consent, inclusive of consideration of disruption payments and approaches to fisheries liaison.	The Commercial Fisheries baseline is provided in **Appendix 21.1, Volume 2c** and summarised in Section 21.6, embedded mitigation is provided in Section 21.7, and the FMMCP is provided in **Fisheries Mitigation, Monitoring and Communication Plan, Volume 3**. • The SFF's design preferences relating to foundation type, cable protection, boulder clearance, and decommissioning are acknowledged and will be considered as part of the FMMCP; • The baseline data sources used to characterise commercial fisheries activity are outlined in detail, and validation through engagement with the

Consultee	Date/Document	Comment	Response/where this is addressed in the EIAR
			fishing industry has provided further details on inshore fishing grounds; The FMMCP has been developed in consultation with SFF.
Urras Sgire Oighreachd Bharabhais Community Company and Urras Oighreachd Ghabhsainn Galson Estate Trust	May 2024/ Scoping Response	The Western Isles Fisherman's Association (WIFA) should be added to the list of consultees.	The WIFA is considered a key Commercial Fisheries stakeholder and is included in the consultee list.
Urras Sgire Oighreachd Bharabhais Community Company	May 2024/ Scoping Response	The area being affected by the Wind Turbine Generators (WTGs) and cable route are productive fishing grounds for many commercial fishing boats. Additional consultation with those who use this area should be carried out to identify the effect on their livelihoods.	Potential impacts from the Array Area and Array Cables to Landfall, including cable protection measures, are assessed with specific relevance to the local fleet's operations in Sections 21.8 to 21.10.

This page has intentionally been left blank

21.3.3 POST SCOPING CONSULTATION

21.3.3.1 Following the receipt of the Scoping Opinion, further consultation relating to Commercial Fisheries has been held with a number of stakeholders.

21.3.3.2 A meeting with several fisheries stakeholders was held as part of a suite of public exhibition events on Lewis/*Eilean Leòdhais* in September 2024. Individual fishers also attended the events. Follow-up meetings were held in October 2024 with additional stakeholders who were not present at the exhibition events. This engagement is captured in **Table 21-3** and was undertaken to provide stakeholders with an introduction to the Offshore Project, Commercial Fisheries baseline data sources and the intended approach to impact assessment.

Table 21-3 Summary of post scoping consultation

Consultee	Date / Document	Comment	Response/where this is addressed in the EIAR
Scottish Fishermen's Federation (SFF) and Scottish Whitefish Producers Association (SWFPA)	26 September 2024/In-person meeting	SFF and SWFPA advised on data sources and updated guidance. Keen to be involved in development of the FMMCP.	Data sources are provided in Section 21.5. The FMMCP is provided in **Fisheries Mitigation, Monitoring and Communication Plan, Volume 3** and has been developed in consultation with SFF and SWFPA.
Orkney Fisheries Association (OFA)	1 October 2024/ Teams meeting	OFA are interested in effects of both the array area and export cable on fisheries access, and in ecology effects.	Potential impacts of the Offshore Project on access to fishing grounds are assessed in Sections 21.8 to 21.10. Potential impacts of the Offshore Project on fish and shellfish ecology are assessed in **Chapter 11, Volume 2a** and **Chapter 12, Volume 2a**. Consequences of these impacts on fishing activity are assessed in Sections 21.8 to 21.10.
OFA	1 October 2024/ Teams meeting	OFA queried what monitoring will be undertaken and what	Monitoring and adaptive management are described in

Consultee	Date / Document	Comment	Response/where this is addressed in the EIAR
		measures will be implemented based on the results of that monitoring, if the Offshore Project is shown to impact fishing vessel activity.	**Fisheries Mitigation, Monitoring and Communication Plan, Volume 3**.
SFF and SWFPA	July 2025/ In-person meeting	Meeting to present updated baseline data and Offshore Project updates. Discussions on the development of the FMMCP. Concern was raised over the inclusion of up to 12 export cables being surface laid.	Potential impacts of the Array Cables to Landfall on Commercial Fisheries are provided in Sections 21.8 to 21.10. Concern in relation to surface laid Array Cables to Landfall has led to a design change to the OCAS (**Figure 21.5, Volume 2b**) – See Section 4.4.7 of **Chapter 4, Volume 1a**.
Scottish Pelagic Fishermen's Association	July 2025/ Teams meeting	Meeting to present updated baseline data and Offshore Project updates. Discussions on the development of the FMMCP. It was confirmed that the Study Area is not routinely targeted by Scottish pelagic trawl vessels, though is an important transit route for UK and Norwegian pelagic trawl vessels.	Potential impacts for pelagic trawl fisheries are assessed in Sections 21.8 to 21.10. Fishing vessels in transit are assessed in **Chapter 16, Volume 2a**.
WIFA and Outer Hebrides Regional Inshore Fisheries Group (RIFG)	September 2025/In-person meetings	Meeting to present updated baseline data and Offshore Project updates. Discussions on the development of the FMMCP.	Further details have informed the baseline characterisation provided in Section 21.6 and FMMCP provided in **Fisheries Mitigation, Monitoring and Communication Plan, Volume 3**.
SFF and SWFPA	October/November 2025	Further discussion on the FMMCP.	The FMMCP is provided in **Fisheries Mitigation, Monitoring and**

Consultee	Date / Document	Comment	Response/where this is addressed in the EIAR
			Communication Plan, Volume 3.
OFA	December 2025	Further discussion on the FMMCP.	The FMMCP is provided in **Fisheries Mitigation, Monitoring and Communication Plan, Volume 3**.

21.4 SCOPE OF THE ASSESSMENT

21.4.1 OVERVIEW

21.4.1.1 This section sets out the scope of the EIAR for Commercial Fisheries. This scope has been developed as the Offshore Project design has evolved and responds to feedback received to date as set out in Section 21.3.

21.4.2 SPATIAL SCOPE AND STUDY AREA

21.4.2.1 The Offshore Project is located within International Council for the Exploration of the Sea (ICES) Division 6a, West of Scotland; within the United Kingdom (UK) Exclusive Economic Zone (EEZ) waters. The Array Area is located within the UK territorial waters 12 nautical miles (nm) boundary, with the majority within the 6 nm boundary. The OCAS is located inside the 6 nm boundary to shore at landfall. For the purpose of statistical analysis, ICES Division 6a is divided into statistical rectangles which are consistent across all Member States operating in the Northeast Atlantic. Each ICES statistical rectangle is '30 min latitude and 1 degree longitude' in size, which equates to approximately 30 nm^2 or 3,600 km^2.

21.4.2.2 The Offshore Project, including the Array Area and OCAS, is located within ICES rectangle 45E3; which forms the Commercial Fisheries local study area for the purposes of the EIAR.

21.4.2.3 In order to understand fishing activity in waters adjacent to the Offshore Project, a Commercial Fisheries regional study area has been defined to include the Commercial Fisheries local study area together with the surrounding ICES rectangles: 45E2, 46E2, and 46E3. Analysis of data at the scale of the Commercial Fisheries regional study area takes into consideration that most commercial fish and shellfish receptor populations are distributed at a wider spatial scale, ensuring that potential implications of displacement of fishing activity can be adequately understood.

21.4.2.4 To summarise, there are 2 scales of Commercial Fisheries study areas as follows:

- Commercial fisheries local study area: 45E3;
- Commercial fisheries regional study area: 45E2, 45E3, 46E2, and 46E3.

21.4.2.5 These Study Areas are shown in **Figure 21.1, Volume 2b**.

21.4.3 TEMPORAL SCOPE

21.4.3.1 The temporal scope of the assessment of Commercial Fisheries is the entire lifetime of the Offshore Project, which therefore covers the construction, O&M, and decommissioning phases. The construction phase is anticipated to commence in 2028 and estimated to last for a period of approximately 5 years (completion in 2033). For the O&M phase, the Offshore Project is expected to be operational for up to 35 years. It is anticipated that the decommissioning phase will consist of the reverse of the construction phase, including a similar duration.

21.4.4 POTENTIAL RECEPTORS

21.4.4.1 The spatial and temporal scope of the assessment enables the identification of receptors which may experience a change as a result of the Offshore Project. The receptors identified that may experience likely significant effects for Commercial Fisheries are provided in **Table 21-4**.

Table 21-4: Commercial Fisheries receptors

Receptor Group	**Details**
Potting vessels <12 m in length targeting lobster and other species	Local inshore vessels, typically with a Western Isles home port, operating potting gear to target lobster, brown crab, velvet crab and ballan wrasse.
Potting vessels ≥12 m in length targeting lobster and other species	Larger vessels, typically operating across a wider region, throughout Scotland/*Alba*, operating potting gear to target lobster and brown crab.
Potting vessels targeting nephrops	Vessels deploying pots to target nephrops.
Demersal otter trawl targeting monkfish and haddock	Vessels deploying nets of mesh size ≥100 mm (gear code: TR1) to target larger demersal species: cod, haddock, saithe, hake, monkfish.
Demersal otter trawl targeting nephrops	Vessels deploying nets of mesh size 70-99 mm (gear code: TR2) to target mixed flatfish & smaller demersal species: plaice, sole, nephrops.
Pelagic trawl	Targeting mackerel, herring and horse mackerel.
Dredge	Targeting king scallop.
Commercial shellfish diving	Fishing techniques using divers operating from a commercial vessel to hand collect king scallop; or a combination of electrofishing and divers to hand collect razor clam.
Gears with hooks	Handling to target seasonal mackerel fishery or longline to target hake and ling.
Set nets	Bottom set nets to seasonally target white fish species including monkfish, turbot and ray species.

21.4.5 ACTIVITIES OR IMPACTS SCOPED INTO THE ASSESSMENT

21.4.5.1 Potential impacts on Commercial Fisheries receptors that have been scoped in for assessment are summarised in **Table 21-5**.

Table 21-5: Activities or impacts scoped into the assessment for Commercial Fisheries

Receptor	Activity or Impact	Potential Effect
Construction, Operation and Maintenance, Decommissioning		
All receptors	Reduction in access to, or exclusion from established fishing grounds in the Array Area.	Offshore Project activities and the presence of Offshore Project infrastructure may lead to a reduction in access to, or exclusion from established fishing grounds. There is potential for some loss of fishing opportunities.
	Reduction in access to, or exclusion from established fishing grounds in the OCAS.	
	Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	Fishing activity may be displaced from the Offshore Project footprint, leading to gear conflict and increased fishing pressure on adjacent grounds. There is potential for displacement of fishing activity.
	Displacement or disruption of commercially important fish and shellfish resources.	Offshore Project activities may lead to the displacement or disruption of commercially important fish and shellfish resources. It is assumed that commercial fisheries will be affected as a result of any loss of resources.
	Increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity.	The movement of vessels associated with the Offshore Project may add to the existing volume of marine traffic in the area, leading to interference with fishing activity.
	Additional steaming to alternative fishing grounds.	This effect will be localised to safety zones and construction, O&M and decommissioning activities and therefore limited deviations to steaming routes are expected.
	Physical presence of infrastructure leading to gear snagging.	Standard industry practice and protocol (e.g. seabed infrastructure will be buried where practicable and/or marked on nautical charts) will minimise the risk of gear snagging and resulting damage, but it remains likely to be an area of industry concern. Safety aspects associated with this impact, including the potential loss of life as a result of snagging risk, will be assessed within the shipping and navigation assessment.

This page has intentionally been left blank

21.4.6 ACTIVITIES OR IMPACTS SCOPED OUT OF ASSESSMENT

21.4.6.1 No potential effects have been scoped out from further assessment.

21.5 METHODOLOGY FOR BASELINE DATA GATHERING AND IMPACT ASSESSMENT

21.5.1 METHODOLOGY FOR BASELINE DATA GATHERING

Overview

21.5.1.1 Baseline data collection has been undertaken to obtain information over the Study Areas described in Section 21.3.3. The current baseline conditions presented in Section 21.6 which provides an overview of the Commercial Fisheries activity, with the detailed baseline characterisation provided in **Appendix 21.1, Volume 2c**.

Desk Study

21.5.1.2 For the purposes of this chapter, a desk study has been undertaken to compile baseline information using relevant spatial and scientific data sources. These existing data sets and literature encompassing the Commercial Fisheries local and regional Study Areas are presented in **Table 21-6.**

21.5.1.3 Data has been sourced from ICES, the European Union (EU) Data Collection Framework, the Marine Directorate National Marine Plan interactive (NMPi), the UK Marine Management Organisation (MMO), and the European Maritime Safety Agency (EMSA).

21.5.1.4 Where data sources allow, a 5-10 year trend analysis has been undertaken, using the most recent annual datasets available at the time of writing. The temporal extent of this time period is dependent on each data source analysed, e.g. 2012-2016; 2016-2020; or 2011-2022.

21.5.1.5 **Appendix 21.1, Volume 2c** includes full details of the analysis undertaken to develop the Commercial Fisheries baseline.

Table 21-6: Data sources used to inform the Commercial Fisheries Environmental Impact Assessment

Source	Year	Summary	Coverage of Study Area
MMO, 2022a; MMO, 2024a	2011-2023	Landings statistics data for UK-registered vessels, with data query attributes for: landing year; landing month; vessel length category; ICES rectangle; vessel/gear type; port of landing; species; live weight (tonnes); and value (£).	Full coverage of the Study Areas.
MMO, 2022b	2016-2020	Vessel Monitoring System (VMS) data for UK registered vessels ≥15 m length. Note that UK vessels ≥12 m in length have VMS on board, however, to date, the MMO provide amalgamated VMS datasets for ≥15 m vessels only. VMS data sourced from MMO displays the first sales value (£) of catches.	Full coverage of the Study Areas.
EMSA, 2024	2019-2023	Fishing vessel route density, based on vessel AIS positional data. AIS is required to be fitted on fishing vessels ≥15 m length.	Full coverage of the Study Areas.
Marine Directorate, 2025	2017-2021	Scottish fishing vessel VMS data indicating fishing intensity by gear type.	Coverage of inshore area out to 12 nm, in its entirety.
Marine Scotland MAPS NMPi, 2024	2009-2013	NMPi (various publication dates) Marine Scotland MAPS NMPi (2023) fisheries datasets.	Full coverage of the Study Areas.
Scottish Government, 2020	N/A	SMP, including description of regional commercial fisheries activity.	Full coverage of the Study Areas.
SPFA, 2024a	2013-2021	Scottish Pelagic Fishermen's Association (SPFA) VMS data for Scottish pelagic trawl member vessels for 2013-2021.	Full coverage of the Study Areas.
SPFA, 2024b	2013-2021	SPFA plotter data for Scottish pelagic trawl member vessels indicating location of fishing.	Full coverage of the Study Areas.
Cefas, 2025	2012-2021	Fishing industry Sensitivity Mapping and Displacement Modelling (FiSMaDiM) of AIS and VMS data to indicate fishing effort (hours) number of vessels and sensitivity index for period 2012-2021.	Full coverage of the Study Areas.
Fishing Scouting Surveys	2023	Locations of potting gear sighted from scouting surveys undertaken in May 2023.	Partial coverage of OCAS and Array Area, based on area scouted.
Inshore fisheries mapping of potting grounds	N/A	Mapping based on representative sample of vessel plotter screenshots of identified fishing grounds across a medium-term period (e.g., up to 10 years).	Partial coverage of Local Study Area, based on grounds targeted by local fishers.

Site Surveys

21.5.1.6 No site-specific surveys have been undertaken to inform the EIAR for Commercial Fisheries. Baseline data sources have been validated via engagement with fisheries stakeholders and by the results of site-specific marine traffic surveys that are described in **Chapter 16, Volume 2a**.

21.5.2 DATA LIMITATIONS AND ASSUMPTIONS

21.5.2.1 Limitations associated with the data used to inform the description of the existing environment are described in **Appendix 21.1, Volume 2c**. These limitations have been managed by ensuring accurate interpretation of the data and clear understanding of its scope, together with cross-referencing between data sources and engagement with the fishing industry. As data forms only part of the evidence base, the limitations identified are not considered to significantly affect the certainty or reliability of the impact assessments for Commercial Fisheries.

21.5.2.2 The Offshore Project is in development and the final design of the Offshore Project is not yet defined (as is standard practice within the industry for projects at this stage of development). To manage this uncertainty and allow a robust impact assessment to be undertaken, the assessment presented in this chapter is based on a maximum design scenario for the Offshore Project. Through adoption of this maximum (or 'realistic worst case') scenario, there is confidence that the maximum potential adverse impact has been assessed, and as a result impacts of greater adverse significance would not arise should any other development scenario to that assessed within this chapter be taken forward in the final scheme design.

21.5.3 METHODOLOGY FOR ENVIRONMENTAL IMPACT ASSESSMENT

Introduction

21.5.3.1 The project-wide generic approach to assessment is set out in **Chapter 5, Volume 1a**. The following sections provide the assessment methodology used to assess the potential impacts on Commercial Fisheries only.

21.5.3.2 The process for determining the significance of effects is a 2-stage process that involves defining the magnitude of the potential impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors.

21.5.3.3 The terminology used to define both impact magnitude and receptor sensitivity for Commercial Fisheries is based on established criteria, which are further elaborated in **Chapter 5, Volume 1a.**

Impact Assessment Criteria

Magnitude

21.5.3.4 The criteria for determining impact magnitude are detailed in **Table 21-7** and are based upon the technical expert's experience and judgement. When assessing the magnitude of potential impacts, the following factors are considered: spatial extent, duration, frequency, and reversibility. Each impact assessment outlines these aspects in detail, providing context for the specific scenario under review.

Table 21-7: Impact magnitude criteria for Commercial Fisheries

Magnitude of Impact	Description
Negligible	The impact is expected to be undetectable relative to pre-development baseline conditions.
Low (Adverse)	The impact may result in a minor loss of target fish or shellfish biological resources (e.g., minor loss of resources within the Study Area) and/or a minor reduction in fishing activities (e.g., reduced fishing effort within the Offshore Project area). The impact may also be of short-term duration (less than 2 years) and/or limited physical extent. This duration is based on professional judgment and may vary depending on the nature of the impact.
Low (Beneficial)	The impact may lead to a minor improvement in resource quality or minor restoration/enhancement of habitats that support commercial fisheries resources.
Medium (Adverse)	The impact may result in partial loss of target fish or shellfish biological resources (e.g., moderate loss within the Study Area) and/or partial loss of fishing activities (e.g., moderate reduction of fishing effort). The impact may have a medium-term duration (e.g., less than 12 years) and/or moderate physical extent.
Medium (Beneficial)	The impact may lead to a moderate improvement in resource quality or moderate restoration/enhancement of habitats that support commercial fisheries resources.
High (Adverse)	The impact may result in substantial loss of target fish or shellfish biological resources (e.g., significant resource loss within the Study Area) and/or substantial reduction in fishing activities (e.g., large decrease in effort). The impact may have a long-term duration (e.g., greater than 12 years) and/or a wide physical extent.
High (Beneficial)	The impact may result in a large-scale or major improvement in resource quality, measurable against biomass reference points, and/or extensive restoration or enhancement of habitats that support commercial fisheries resources.

Timeframes defined in Magnitude Criteria

21.5.3.5 EIA regulations and guidelines recognise the importance of defining the duration of impacts, though terms like "long-term," "medium-term," and "short-term" and these durations can vary based on context and sector, such as in Commercial Fisheries. While there is no universally standardised definition of these terms, general guidelines can inform their appropriate use. For

context, the EIA Regulations focus more on assessing the significance of impacts rather than rigidly defining timeframes, but they emphasize the need for a comprehensive analysis of impacts over different temporal scales. Similarly, the International Energy Agency and UK EIA guidelines recommend considering the temporal relevance of impacts in relation to a project's lifecycle.

21.5.3.6 In relation to Commercial Fisheries, the following timeframes are considered appropriate to the Offshore Project:

- Short-term:
  - These are typically impacts that last for a relatively brief period, often in the range of 1-2 years;
  - Short-term impacts generally refer to temporary changes that are expected to reverse quickly once the disturbance has ceased. This timeframe is consistent with the natural recovery cycles of many environmental systems.
- Medium-term:
  - Medium-term impacts are often those expected to last several years but not beyond 10-12 years;
  - The recovery or restoration of affected systems might take this amount of time, especially when it comes to ecosystems or species that require longer periods to recover or regenerate.
- Long-term:
- Long-term impacts typically extend beyond 12 years, occur throughout the lifetime of the Offshore Project (35 years) or only partially reversible within the human timescale;
  - Long-term impacts could involve major habitat changes, loss of biodiversity, or irreversible degradation of fisheries resources, which may take decades or longer to recover, if they recover at all.

Sensitivity

21.5.3.7 The criteria for assessing receptor sensitivity are outlined in **Table 21-8**. These criteria reflect the vulnerability of Commercial Fisheries receptors to potential impacts, as well as their capacity to recover.

Table 21-8: Receptor sensitivity criteria for Commercial Fisheries

Sensitivity Value	Description	Example Indicators
Negligible	The receptor is not vulnerable to project-related impacts and/or has high recoverability. Additionally, extensive alternative fishing grounds may be available, and the fishing fleet may be highly adaptive and resilient to change.	▪ No reliance on affected grounds; ▪ Vessel(s) operate across multiple regions or grounds. ▪ Impacts are spatially or temporally insignificant to operations.
Low	The receptor is generally not vulnerable to project-related impacts and/or has high recoverability. There may be abundant alternative fishing grounds, and the fishing fleet may have a large operational range, along with a high degree of adaptability and resilience.	▪ Area represents a small portion of fleet activity; ▪ Similar grounds are accessible within normal operational range. ▪ Flexible gear use or target species.
Medium	The receptor is somewhat vulnerable to project-related impacts and has moderate recoverability. There may be moderate levels of alternative fishing grounds available, and the fishing fleet may have a moderate operational range.	▪ Affected grounds contribute materially to seasonal income; ▪ Some difficulty relocating effort without displacement or loss. ▪ Limited spatial mobility or operational constraints (e.g. gear type, vessel size).
High	The receptor is highly vulnerable to project-related impacts, with limited or no recoverability. There are limited or no alternative fishing grounds available for the receptor.	▪ Area represents core or primary fishing ground; ▪ Gear types/location highly specific with no feasible alternatives; ▪ Economic dependency on affected activity. ▪ Long-term or permanent loss anticipated.

Significance

21.5.3.8 By assigning and combining magnitude and sensitivity criteria, overall effect significance upon Commercial Fisheries receptors can be determined (**Table 21-9**).

21.5.3.9 Where a range is suggested for the significance of effect, for example, minor to moderate, it is possible that this may span the significance threshold. The technical specialist's professional judgement will be applied to determine which outcome defines the most likely effect, which takes in to account the sensitivity of the receptor and the magnitude of impact. Where professional judgement is applied to quantify final significance from a range, the assessment will set out the factors that result in the final assessment of significance. These factors may include the likelihood that an effect will occur, data certainty and relevant information about the wider environmental context.

21.5.3.10 For the purposes of this assessment:

- A level of residual effect of moderate or more will be considered a 'Significant' effect in terms of the EIA Regulations;
- A level of residual effect of minor or less will be considered 'Not Significant' in terms of the EIA Regulations.

21.5.3.11 Effects of moderate significance or above are therefore considered important in the decision-making process, whilst effects of minor significance or less warrant little, if any, weight in the decision-making process.

Table 21-9: Matrix used for the Commercial Fisheries assessment of significance of the effect

		Receptor Sensitivity			
		Negligible	**Low**	**Medium**	**High**
Magnitude of Impact	**Negligible**	Negligible (Not Significant)	Negligible (Not Significant)	Negligible (Not Significant)	Negligible (Not Significant)
	Low	Negligible (Not Significant)	Negligible (Not Significant)	Minor (Not Significant)	Minor (Not Significant)
	Medium	Negligible (Not Significant)	Minor (Not Significant)	**Moderate** (Potentially Significant)	**Moderate** (Potentially Significant)
	High	Negligible (Not Significant)	Minor (Not Significant)	**Moderate** (Potentially Significant)	**Major** (Significant)

Cumulative Effect Assessment Methodology

21.5.3.12 The CEA considers other plans and projects that may act collectively with the Offshore Project to give rise to cumulative effects on Commercial Fisheries receptors. The general approach to the CEA for Commercial Fisheries involves screening for potential cumulative effects, identifying a short list of plans and projects for consideration and evaluating the significance of cumulative effects. **Chapter 5, Volume 1a** provides further details on the general framework and approach to the CEA.

Transboundary Effect Assessment Methodology

21.5.3.13 The transboundary effect assessment considers the potential for effects to occur as a result of the Offshore Project on Commercial Fisheries receptors within the Exclusive Economic Zone (EEZ) of other European Economic Area (EEA) member states or other interests of EEA member states. **Chapter 5, Volume 1a** provides further details on the general framework and approach to the transboundary effect assessment.

21.6 BASELINE CONDITIONS

21.6.1 CURRENT BASELINE

21.6.1.1 A summary of the Commercial Fisheries baseline environment is provided in the following sections. Full details of the analysis undertaken to develop the Commercial Fisheries baseline is provided in **Appendix 21.1, Volume 2c**.

Overview of Landings

21.6.1.2 Landings over the period 2011-2023 are presented in **Appendix 21.1, Volume 2c**. For the purposes of this summary of the baseline description, focus is given to the most recent datasets across a 5-year period (2019-2023), with context for longer-term trends provided where relevant. In summary, the 13-year analysis is presented in the **Appendix 21.1, Volume 2c**, with more focus on a recent 5-year period provided in this section.

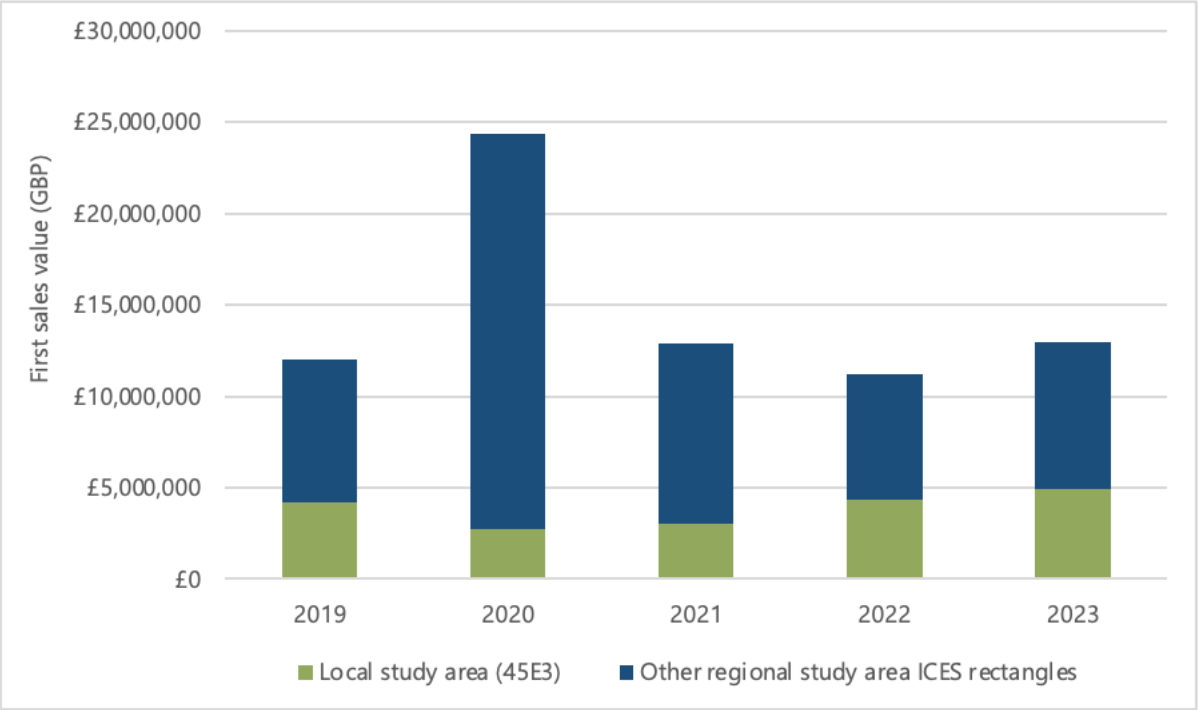
21.6.1.3 On average, £3.9 million in first sales value is landed from the Commercial Fisheries local Study Area (ICES rectangle 45E3), based on 5-years from 2019-2023. Peak landings occurred in 2023 at a value of £4.9 million. The average annual value landed from the Commercial Fisheries regional Study Area is £14.7 million, peaking in 2020 at £24.4 million (**Plate 21-1**; MMO, 2024a).

21.6.1.4 Trends in landings from the local Study Area show a significant drop from 2019-2020 (by approximately £1.5 million), with landings increasing across 2021 and 2022. It is noted that the time period of the baseline data analysis includes years impacted by Covid-19, specifically 2020 and 2021 when restrictions affected normal business operations and market trade. Landings at a national level were seen to decline over this period. For example, the total first sales value of commercial landings by Scottish vessels decreased from a high of £735 million in 2016, to a low of £520 million in 2020 due to the impacts of Covid-19 (Marine Directorate, 2023). The total value

landed by Scottish vessels has since increased to £617 million in 2022. The trend of increased landings at a Scottish national scale is also seen in the data for the local Study Area.

21.6.1.5 In contrast to the decline in landings in 2020 from the local Study Area, the other ICES rectangles within the regional Study Area show a marked spike in 2020. This was due to mackerel landings worth approximately £15.4 million caught in ICES rectangles 46E2 and 46E3, north of the local Study Area and Offshore Project.

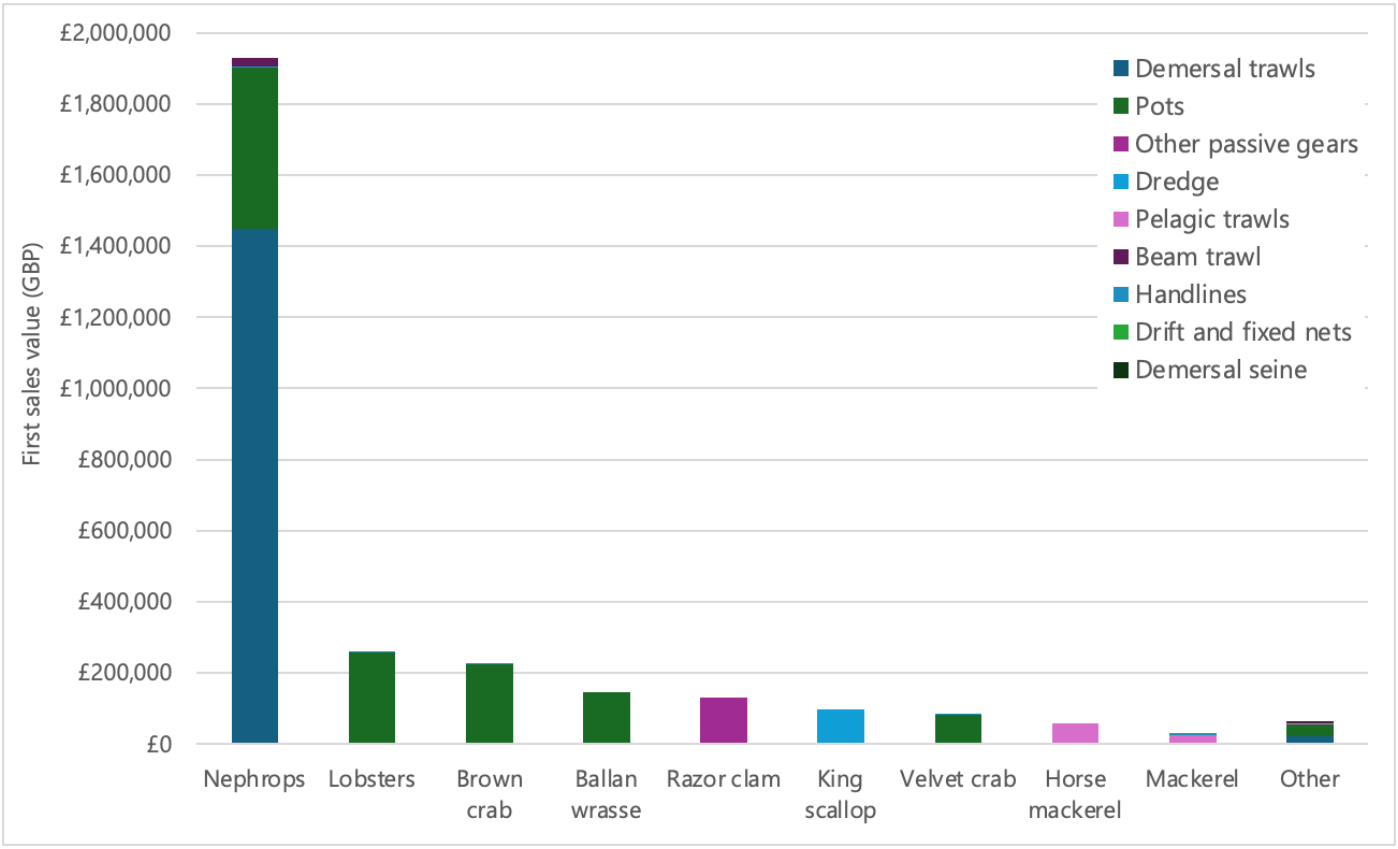
Plate 21-1 Annual landed value from the Commercial Fisheries regional Study Area indicating landings from the local Study Area (shown in green) and from the other ICES rectangles within the regional Study Area (shown in navy blue) (data source: MMO, 2024a).



21.6.1.6 The key species landed from the Commercial Fisheries local Study Area are *Nephrops norvegicus* (also known as Norway lobster, langoustine or prawn, hereon referred to as 'nephrops'), lobster *Homarus gammarus*, brown crab *Cancer pagurus*, Ballan wrasse *Labrus bergylta*, razor clam *Ensis siliqua*, king scallop *Pecten maximus*, velvet crab *Necora puber*, horse mackerel *Trachurus trachurus* and mackerel *Scomber scombrus* (**Plate 21-2**).

21.6.1.7 Landing statistics indicate that the key fisheries in the regional Study Area are targeting mackerel, nephrops, monkfish *Lophius piscatorius*, haddock *Melanogrammus aeglefinus*, brown crab, lobster, squid *Loligo vulgaris* and mixed demersal whitefish.

Plate 21-2: Average annual landed value of species from the Commercial Fisheries local Study Area indicating gear type, based on 5-year average from 2019-2023 (data source: MMO, 2024a).



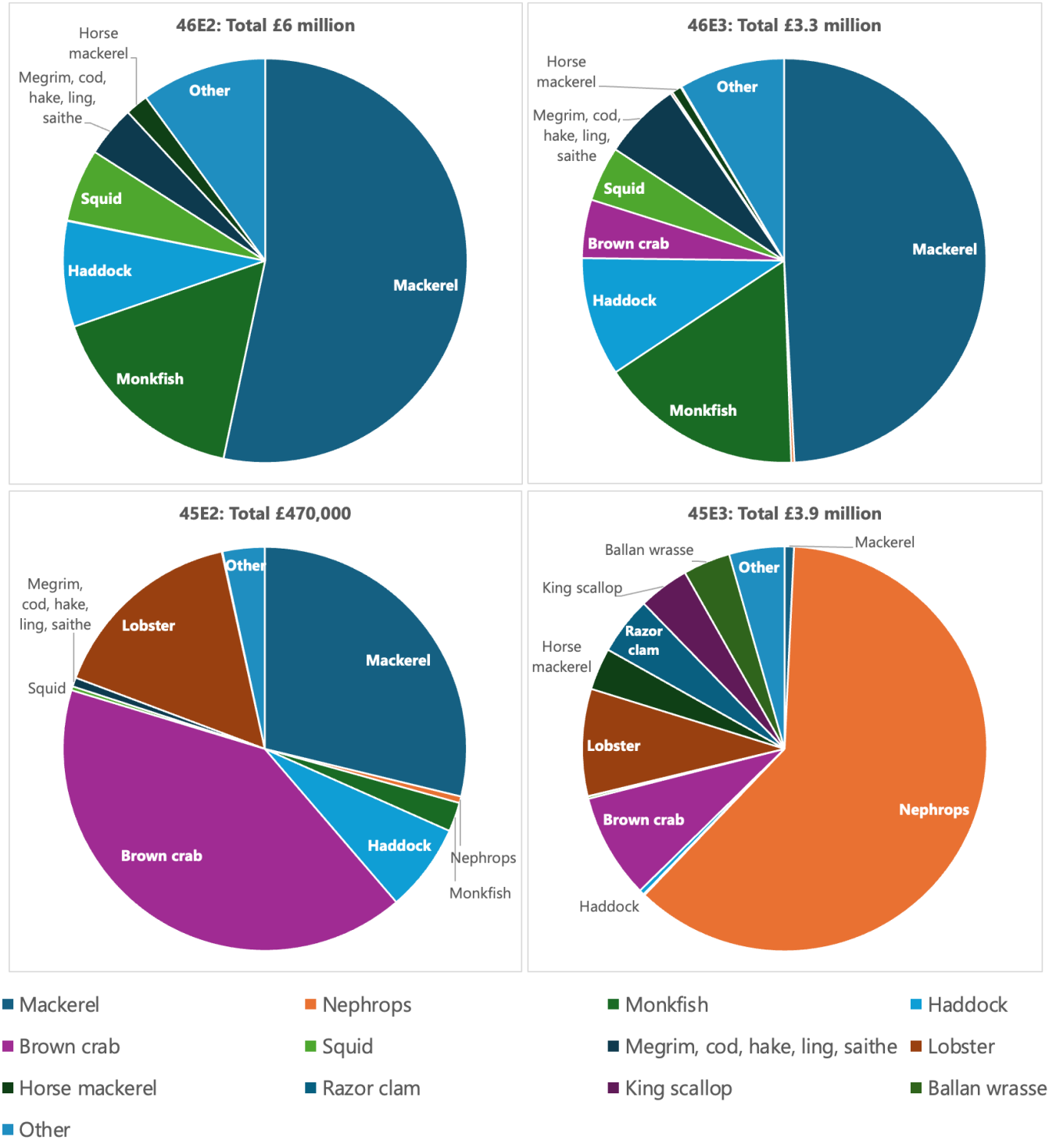
21.6.1.8 Average annual landings from the period 2019-2023 are presented by ICES rectangle and species in **Plate 21-3** (based on data from MMO, 2024a).

21.6.1.9 The local Study Area (ICES rectangle 45E3) is split across the west and east sides of Lewis/*Eilean Leòdhais*, with distinct habitats and associated fisheries on either side. Nephrops and king scallop fisheries dominate the east side of Lewis/*Eilean Leòdhais*, while brown crab and lobster are caught on both west and east coasts. Landings from the local Study Area are dominated by nephrops (caught to the east of Lewis/*Eilean Leòdhais* and out with the Study Area), as well as brown crab and lobster.

21.6.1.10 Seasonal restrictions on creel fishing are in place along the west coast of Lewis/*Eilean Leòdhais* under The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Outer Hebrides) Order 2017. Within the Bragar to Dell Protected Area (SSI 2017 No. 48, Article 5), the use of creels and parlour creels for any sea fish is prohibited annually from 1 November to 31 March to protect inshore stocks and support seasonal recovery. Additionally, in the Loch Roag Protected Area (SSI 2017 No. 48, Article 7), fishing for shellfish using creels or parlour creels is prohibited each year between 1 May and 31 July, reflecting seasonal sensitivities and spawning periods. These temporal closures aim to manage fishing effort sustainably and safeguard key marine habitats and species during vulnerable periods.

21.6.1.11 In the regional Study Area, landings to the west of the Offshore Project (i.e., ICES rectangle 45E2) are dominated by brown crab, lobster and mackerel. Landings to the north of the Offshore Project (i.e., ICES rectangles 46E2 and 46E3) are targeted on a mackerel fishery and mixed demersal fishery of monkfish, haddock, squid and mixed whitefish species.

Plate 21-3: Average annual landed value of species from the Commercial Fisheries regional Study Area by ICES rectangle, based on 5-year average from 2019-2023 (data source: MMO, 2024a).

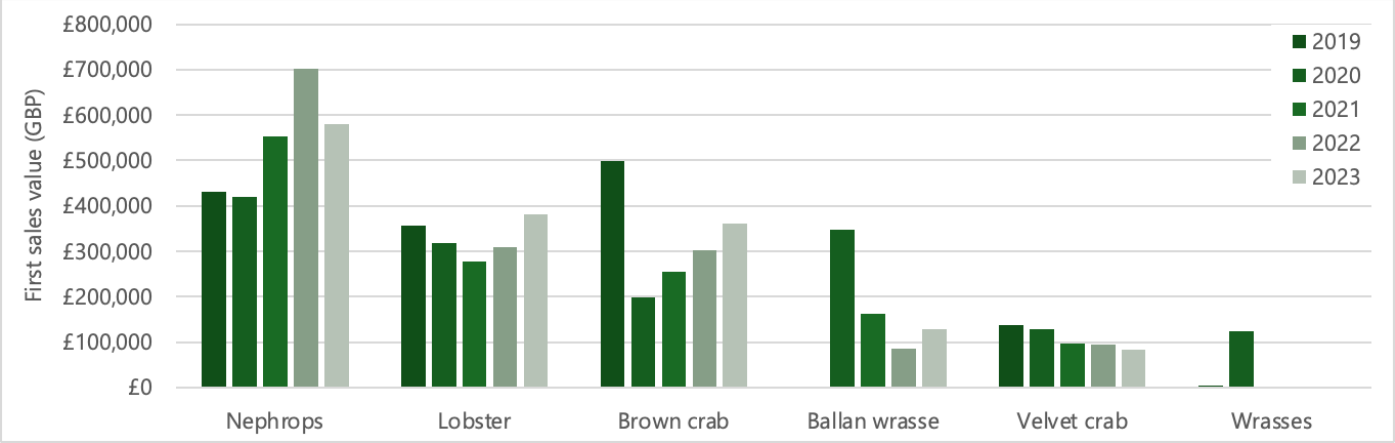


Landings by Fishing Gear Types

Potting Fishery

21.6.1.12 The potting fisheries account for £1.5 million first sales value landed annually from the local Study Area, compared to £1.9 million from the regional Study Area. The potting fishery in the local Study Area primarily targets nephrops (on the east of Lewis/*Eilean Leòdhais*), lobster, brown crab, ballan wrasse and velvet crab. The nephrops potting fishery has an average annual first sales value of £540,000, and the equivalent value for the other species combined is £950,000. Landings in lobster have remained relatively stable across the 5-year period, while a significant decline is noted in brown crab from 2019-2020, landings have gradually increased year on year to £360,000 in 2023. Ballan wrasse and other wrasse species are used as cleaner fish and sold live into the local aquaculture industry. Landings peaked in 2020 and have declined since. A 5-year view of potting industry sales in the local Study Area is provided in **Plate 21-4.**

Plate 21-4: First sales value of landings by the potting fishery in the local Study Area from 2019-2023 (data source: MMO, 2024a)



21.6.1.13 Landings by potting vessels are predominately made into Back/*Am Bac*, Stornoway/*Steòrnabhagh*, Carloway/*Càrlabhagh*, Bernera/*Beàrnaraigh* and South Lochs. Carloway/*Càrlabhagh* is the closest fishing port to the Offshore Project, with landings dominated by lobster and brown crab. Lobster is targeted from April-December with peaked landings in August; brown crab is caught year-round, peaking in December; and ballan wrasse are principally caught in August and September.

21.6.1.14 Information from FiSMaDiM project is presented for cumulative fishing effort (hours) by pots and traps based on data from 2012-2021 in **Figure 21.2, Volume 2b.**

Demersal Otter Trawl Fishery

21.6.1.15 The demersal otter trawl fishery targets 3 distinct fisheries:

- Monkfish, haddock and mixed finfish species;
- Squid *Loligo forbesii*;
- Nephrops.

21.6.1.16 The demersal otter trawl fisheries account for £1.9 million first sales value landed annually from the local Study Area, compared to £6.9 million from the regional Study Area.

21.6.1.17 The monkfish, haddock and mixed finfish species fisheries are primarily targeted in ICES rectangle 46E2 and 46E3, located out with the Offshore Project Boundary and approximately 10-30 km from the Turbine Area. Consultation with industry stakeholders has identified that this fishery operates along the slope of the continental shelf edge located west and northwest of Lewis/*Eilean Leòdhais* at depths ranging from 150-600 m. The fishery operates demersal trawl gear and pair trawling with year-round activity, and landings peaking during calmer weather (spring–autumn). Some seasonal shifts in depth distribution may influence trawl location, especially during spawning movements or colder months. Landings from this area contribute significantly to Scotland/*Alba's* monkfish quota. Vessels are typically medium to large-sized trawlers (often 20-30 m in length), some based locally and others from larger ports like Ullapool/*Ulapul*, Kinlochbervie/*Ceann Loch Biorbhaidh*, and Lochinver/*Loch an Inbhir*. Regulations and management include Total Allowable Catches (TACs) by species and stock area, minimum conservation reference sizes and mesh sizes for trawls.

21.6.1.18 Vessel monitoring system data indicates the spatial distribution of this fishery along the continental shelf as presented in **Appendix 21.1, Volume 2c.**

21.6.1.19 The squid fishery off the northwest coast of Lewis/*Eilean Leòdhais*, within ICES Division 6a (West of Scotland/*Alba*), is a seasonal and opportunistic fishery primarily targeting the long-finned squid (*L. forbesii*). This species is the most commercially significant cephalopod in Scottish waters. The fishing season is typically from late summer through autumn, with peak activity in October and November. This timing aligns with the squid's pre-spawning migration from the West Coast into the North Sea.

21.6.1.20 Squid are typically caught over sandy or muddy seabeds along the continental shelf edge, at depths ranging from 50-200 m. Demersal trawlers operating in the area to target nephrops and whitefish may switch to target squid during the peak season. The squid fishery off the northwest coast of Lewis/*Eilean Leòdhais* is a valuable seasonal fishery. Informed by VMS data of the spatial footprint of the demersal trawl fishery and the habitat preference for sandy and muddy seabeds, the squid fishery is highly unlikely to occur within the Offshore Project.

21.6.1.21 The Nephrops fishery occurs east of Lewis/*Eilean Leòdhais*, within the North Minch area of the West of Scotland/*Alba*. It is targeted by demersal trawlers using single and multi-rig configurations (as well as by potting/creeling as described earlier). Nephrops inhabit soft, muddy sediments, where they construct burrows. The distribution of the fishery is therefore closely tied to the availability of these suitable substrates.

21.6.1.22 Landings by demersal otter trawl vessels are made into Stornoway/*Steòrnabhagh*, Ullapool/*Ulapul*, Gairloch/*Geàrrloch*, Lochinver/*Loch an Inbhir* and Uig/*Ùige*.

21.6.1.23 Information from FiSMaDiM project is presented for the cumulative fishing effort (hours) by demersal trawl based on data from 2012-2021 in **Figure 21.3, Volume 2b**.

Scallop Dredge Fishery

21.6.1.24 The scallop dredge fishery targets king scallop and accounts for £154,000 first sales value landed annually from the local Study Area.

21.6.1.25 The scallop dredge fishery operates on the east coast of Lewis/*Eilean Leòdhais*.

Hook and Line Fishery

21.6.1.26 The hook and line or jigging fishery primarily targets mackerel and accounts for £6,000 first sales value landed annually from the local Study Area.

21.6.1.27 In the local Study Area, activity is focused in the inshore areas from 0-3 nm. Mackerel caught by line/jigging are targeted seasonally in July and August.

Pelagic Trawl Fishery

21.6.1.28 The pelagic trawl fishery primarily targets mackerel and accounts for £162,000 first sales value landed annually from the local Study Area, compared to £5.2 million from the regional Study Area. The pelagic fleet includes both pelagic trawl and purse seine nets.

21.6.1.29 Information from FiSMaDiM project is presented for the cumulative fishing effort (hours) by pelagic trawl based on data from 2012-2021 in **Figure 21.4, Volume 2b**.

21.6.2 FUTURE BASELINE

21.6.2.1 In line with the EIA Regulations, this EIAR requires a "*description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the Offshore Project as far as natural changes from the baseline scenario can be assessed with reasonable effort, on the basis of the availability of environmental information and scientific knowledge*". This reflects how the baseline relevant to Commercial Fisheries is expected to evolve without the Offshore Project.

21.6.2.2 If the Offshore Project is not developed, an assessment of the future baseline conditions has also been carried out and is described within this section. The likely evolution of the future baseline indicates that the haddock fishery targeted across the Array Area may become more important based on improved processing facilities and potential for increased quota due to the UK-exit from the EU.

21.6.2.3 Commercial Fisheries patterns change and fluctuate based on a range of natural and management-controlled factors, including the following:

- Response to existing OWF developments, including other ScotWind projects;

- Market demand: commercial fishing fleets respond to market demand, which is impacted by a range of factors, including the 2020-2021 COVID-19 pandemic;
- Market prices: commercial fishing fleets respond to market prices by focusing effort on higher value target species when prices are high and markets in demand;
- Stock abundance: fluctuation in the biomass of individual species stocks in response to status of the stock, recruitment, natural disturbances (e.g. due to storms, sea temperature etc.), changes in fishing pressure etc.;
- Fisheries management: including new management for specific species where overexploitation has been identified, or changes in TACs leading to the relocation of effort, and/or an overall increase/decrease of effort and catches from specific areas;
- Environmental management: including the potential restriction of certain fisheries within protected areas;
- Improved efficiency and gear technology: with fishing fleets constantly evolving to reduce operational costs, for example by moving from beam trawl to demersal seine;
- Sustainability: with seafood buyers more frequently requesting certification of the sustainably of fish and shellfish products, such as the Marine Stewardship Council certification, industry is adapting to improve fisheries management and wider environmental impacts;

21.6.2.4 Additionally, climate change is increasingly altering the distribution and availability of stocks, with warming seas leading to the loss of traditional species in some areas and the arrival of new or uncommon species, for example, recent octopus blooms reported in UK waters, further influencing fishing patterns and fleet behaviour.

21.6.2.5 The variations and trends in commercial fisheries activity are an important aspect of the baseline assessment and forms the principal reason for considering up to 13 years of key baseline data (no ting that data for 2011-2023 are presented in **Appendix 21.1, Volume 2c**). Given the time periods assessed, the future baseline scenario would typically be reflected within the current baseline assessment undertaken.

21.6.2.6 Following the UK withdrawal from the EU, the UK and the EU have agreed to a Trade and Cooperation Agreement (TCA), applicable on a provisional basis from 01 January 2021. The TCA sets out fisheries rights and confirms that from 01 January 2021 and during a transition period until 30 June 2026, UK and EU vessels will continue to access respective EEZs, (12-200 nm) to fish. In this period, EU vessels will also be able to fish in specified parts of UK waters between 6-12 nm.

21.6.2.7 Over the 5-year transition period 25% of the EU's fisheries quota in UK waters will be transferred to the UK; with 15% transferred in year 1, most of this quota has already been transferred and distributed across the 4 nations of the UK. After the 5-year transition there will be annual discussions on fisheries opportunities. Across the Commercial Fisheries regional Study Area, where UK fisheries primarily target non-quota shellfish species, it is expected that fleets are unlikely to be impacted by quota transfers. It is possible that UK vessels will seek to exploit additional quota-

species opportunities, but fishing vessel owners would need to obtain the relevant quota allocation for that specific target species.

21.6.2.8 Market changes have the potential to impact fishing activity in the Commercial Fisheries regional Study Area; some of the catch landed by UK vessels is exported to EU markets (e.g. brown crab) and potential tariff/non-tariff barriers could affect which species are targeted and to what extent.

21.7 BASIS FOR ENVIRONMENT IMPACT ASSESSMENT

21.7.1 MAXIMUM DESIGN SCENARIO

21.7.1.1 Assessing using a parameter-based design envelope approach means that the assessment considers a maximum design scenario whilst allowing the flexibility to make improvements in the future in ways that cannot be predicted at the time of submission of the consent applications. The assessment of the maximum adverse scenario for each receptor establishes the maximum potential adverse impact and as a result impacts of greater adverse significance would not arise should any other development scenario (as described in **Chapter 3, Volume 1a**) to that assessed within this chapter be taken forward in the final scheme design.

21.7.1.2 The maximum parameters and assessment assumptions that have been identified to be relevant to Commercial Fisheries are outlined in **Table 21-10** and are in line with **Chapter 3, Volume 1a.**

21.7.1.3 Although pre-construction surveys may involve some limited and temporary interactions with the marine environment, the potential impacts of any such activities fall well within the MDS parameters assessed for this chapter. The MDS includes activities such as WTG foundation drilling and grouting, and Offshore Cable installation which represent a conservative upper bound on seabed disturbance, and vessel presence. These MDS activities therefore encompass the environmental footprint of pre-construction survey methods, which are significantly lower in magnitude, duration, and spatial extent.

21.7.1.4 For this reason, the potential environmental interactions of pre-construction surveys are not separately assessed, as they are already inherently accommodated within the worst case assumptions underpinning the MDS for this topic.

21.7.1.5 The difference in timing between pre-construction surveys and construction activities does not affect the assessment because the MDS represents the maximum magnitude of change, independent of phasing or scheduling. The pre-construction surveys occur over a much shorter duration and at materially lower intensities than the MDS bounding activities, and therefore do not introduce any temporal additive effects beyond those already assessed.

Table 21-10: Maximum parameters and assessment assumptions for impacts on Commercial Fisheries

Offshore Project Phase and Activity/Impact)	Maximum Design Scenario	Justification
Construction		
Reduction in access to, or exclusion from established fishing grounds within the Array Area.	**Offshore Project areas** Offshore Project Boundary: 208 km^2 Array Area: 161 km^2 Turbine Area: 140 km^2 OCAS: 47 km^2 **Energy transmission infrastructure: Scenario 2 (WTGs without OSP)** **WTG specifications** - Maximum of WTGs: up to 60 - Foundation: Hybrid Gravity Base - Minimum spacing 900 m between WTGs - WTG with up to 4 legged jacket foundations with sea surface dimensions of 35 m x 35 m. **Total seabed disturbance from WTG boulder clearance and foundation installation** - Area required for Jack up vessel installation for up to 60 WTGs; - Hybrid Gravity Base (HGB) foundations; - Number of JUV placements per WTG: 2 <u>Seabed footprint</u> - Seabed disturbance per WTG boulder clearance (area includes for WTG foundation template, JUV placement and clearance): 60,000 m^2 - Total seabed disturbance for WTG boulder clearance: 60,000 m^2 x 60 = **3,600,000 m^2 (3.6 km^2)** **Offshore Cable specifications** Scenario 2: the installation of up to x12 Array Cables to final WTG in string (within Array Area) and up to x12 Array Cables to Landfall (within OCAS). **Installation method**: 100% surface laid cable with intermittent stabilisation using rock bags, with spacing of 5-15 m, depending on the route. Cable Length: - Array Cables to final WTG maximum length of 160 km; - Array Cables to Landfall maximum length of 190 km; - Maximum length of Array Cables is therefore 350 km.	The maximum parameters represent the maximum duration and extent of fishing exclusion throughout the construction phase and, hence, the greatest potential to restrict access to fishing grounds. The Offshore Cables scenario without OSP represents the maximum parameters for cables, while the scenario with OSP in the Array Area represents the maximum parameter for infrastructure within the Array Area.

Offshore Project Phase and Activity/Impact)	Maximum Design Scenario	Justification
	Offshore Cable boulder clearance disturbance Seabed disturbance associated with installation of up to 12 Array Cables and Array Cables to Landfall for Scenario 2. - Maximum length of cables: 350 km - Seabed disturbance corridor: 15 m boulder clearance + 5 m spoil either side = 25 m total - Maximum seabed disturbance corridor width: 25 m - Installation method: surface lay (across 100% of cable) Total seabed disturbance for Offshore Cable boulder clearance: 350 km x 25 m = **8,750,000 m^2 (8.75 km^2)** **Assumption**: Boulder clearance needed in areas with medium or low-density boulders. In high density boulder fields surface lay on top of boulder fields after pre-lay rock carpet laid. It is assumed that construction activities would not occur across the entirety of the Turbine Area or OCAS at any one time. Therefore, it is assumed that fishing is not prohibited from resumption in areas where construction has not yet commenced or is completed. **Construction programme** - Maximum duration of offshore construction is up to 5 years. - Working hours are expected to be 24 hours, 7 days a week. - Offshore construction within the Offshore Project Boundary will only be undertaken during the April-October period, except for offshore Landfall construction works located within the HDD Exit Pit Area. **Construction working arrangements** - Buoyed construction area encompassing the maximum extent of the Turbine Area; - 500 m safety zones around wind farm structure or offshore transmission infrastructure (WTG or OSP) and/or foundations during construction activities; - 50 m safety zones around partially complete structures or complete structures; - 500 m radius advisory exclusion zones around Offshore Project vessels undertaking construction activities; - Safety zones and advisory exclusion zones in place throughout construction phase i.e., maximum of 5 years. - All third-party vessels will choose not to navigate within the buoyed construction area based on experience at previously under construction offshore wind farms which are delineated with buoyage.	
Reduction in access to, or exclusion from established fishing grounds within the OCAS.	The MDS used for this assessment is identical to the MDS for the Offshore Project construction phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	The MDS used for this assessment is identical to the MDS for the Offshore Project construction phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Displacement or disruption of commercially important fish and shellfish resources.	See fish and shellfish ecology MDS presented in **Chapter 11, Volume 2a** and **Chapter 12, Volume 2a**.	

Offshore Project Phase and Activity/Impact)	Maximum Design Scenario	Justification
Increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity.	**Total Installation Vessel Movements (Return Trips) (per year):** - Installation vessel (no. x1): 4- 5 WTG per trip so up to 15 trips - Jacket installation vessel (no. x1): up to 2 trips - expected vessel would stay in Array Area - Drilling vessel (no. x2): up to 2 trips - expected vessel would stay in Array Area - Grout and pile supply vessel (no. x2): up to 80 trips - Barge (no. x2): up to 80 trips - Pile installation vessel (no. x1): up to 60 trips - Tug and anchor handlers (no. x2): up to 180 trips - Cable lay and support vessels (no. x9): up to 100 trips - Guard vessels (no. x2): up to 25 - Seabed preparation vessels (no. x6): up to 25 trips - Crew transfer vessels (no. x3 CTV or 1 SOV): up to 250 trips - Scour protection installation vessels (no. x2): up to 25 trips - Cable protection installation vessels (no. x2): up to 25 trips - Cable Lay Installation & Support Vessels: 12-25 trips - Helicopters (no. x1): up to 50 trips **Maximum vessels on site: up to 35** **Maximum return trips: up to 871**	The maximum number of vessels transits and the maximum duration of the construction would result in the greatest potential for interference.
Additional steaming to alternative fishing grounds - all other fleets.	The MDS used for this assessment is identical to the MDS for the Offshore Project construction phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Physical presence of infrastructure leading to gear snagging.	The MDS used for this assessment is identical to the MDS for the Offshore Project construction phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	

Offshore Project Phase and Activity/Impact)	Maximum Design Scenario	Justification
Operational and maintenance		
Reduction in access to, or exclusion from established fishing grounds within the Array Area.	**Offshore Project areas** Offshore Project Boundary: 208 km^2 Array Area: 161 km^2 Turbine Area: 140 km^2 OCAS: 47 km^2 **Presence of up to 60 WTGs and Array Cables:** Scenario 2 (60 WTGs and 12 Array Cables to Landfall without OSP) across the project lifetime (up to 35 years): maximum long-term habitat loss = **2,411,500 m^2 (2.411 km^2)** **WTG:** - Up to 60 WTGs; - Hybrid Gravity Base foundations; - Minimum spacing 900 m between WTGs - Seabed footprint per WTG (including foundation area and scour protection) = 105 m x 105 m - Maximum long-term seabed habitat loss of WTGs: (105 m x 105 m) x 60 = **661,500 m^2 (0.662 km^2)** **Array Cables** - Cable length: 12 Array Cables to Final WTG (within the Turbine Area) and 12 Array Cables to Landfall (within the OCAS) equating to a maximum cable length of 350 km. - Maximum corridor width = 5 m - Maximum long-term seabed disturbance habitat loss for Offshore Cables: 350 km x 5m = **1,750,000 m^2 (1.75 km^2)** **Array Cable protection and stabilisation** - Cable length: 12 Array Cables to Final WTG (within the Array Area) and 12 Array Cables to Landfall (within the OCAS) equating to a maximum cable length of 350 km (189 NM). - 100% of Array Cable surface laid. Therefore, Offshore Cables are present on the seafloor and require protection and stabilisation. - Cable stabilisation: Pre lay carpet will have a maximum width of 5 m, height of 0.3 m and volume of **1,130,000 m^3**. - The rock berm profile will have a base of 5 m, with a 1:3 slope, and a top crest width of 3 m. - Cable protection: will be achieved using rock berms, rock bags, concrete mattresses or other inert material and will have a maximum width of 3 m, height of 1.1 m and volume **2,600,000 m^3**. Total volume of cable stabilisation and protection (pre-lay carpet and rock berm): **3,730,000 m^3**. **Maintenance working arrangements** - Presence of 500 m safety zones during major maintenance; - 500 m radius advisory exclusion zones around Offshore Project vessels undertaking major maintenance activities. - Commercial vessels will choose not to navigate within the Turbine Area. - Small craft (fishing vessels and recreational vessels may choose to navigate internally within the Turbine Area. **Vessel movements** - Up to 10 operational and maintenance vessels on site simultaneously; - Up to 32,034 total lifetime (return trips) **Operational and maintenance programme** - Duration is up to 35 years.	This represents the maximum duration and extent of fishing exclusion throughout the O&M phase and hence the greatest potential to restrict access to fishing grounds.

Offshore Project Phase and Activity/Impact)	Maximum Design Scenario	Justification
Reduction in access to, or exclusion from established fishing grounds within the OCAS.	The MDS used for this assessment is identical to the MDS for the Offshore Project O&M phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	The MDS used for this assessment is identical to the MDS for the Offshore Project O&M phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Displacement or disruption of commercially important fish and shellfish resources.	See fish and shellfish ecology maximum design scenario presented in **Chapter 11, Volume 2a** and **Chapter 12, Volume 2a**.	
Increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity.	**Vessel movements** - Up to 10 O&M vessels on site simultaneously; - Up to 32,034 total lifetime (return trips) **Construction working arrangements** - Presence of 500 m safety zones during major maintenance; - Commercial vessels will choose not to navigate within the Turbine Area. - Small craft (fishing vessels and recreational vessels may choose to navigate internally within the Turbine Area. **Operational and maintenance programme** - Duration is up to 35 years.	The maximum number of WTGs and associated infrastructure will lead to the highest level of maintenance activities and therefore highest level of maintenance vessel round trips. The maximum number of vessels transits and the maximum duration of the operational period would result in the greatest potential for interference.
Additional steaming to alternative fishing grounds - all other fleets.	The MDS used for this assessment is identical to the MDS for the Offshore Project O&M phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Physical presence of infrastructure leading to gear snagging.	The MDS used for this assessment is identical to the MDS for the Offshore Project O&M phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Decommissioning		
Reduction in access to, or exclusion from established fishing grounds in the Array Area.	The decommissioning sequence will generally be the reverse of the construction sequence and involve similar types and numbers of vessels and equipment. Activities similar to the Construction phase (but in reverse). The assumptions for the construction phase therefore apply. Following the O&M phase, components of the Offshore Project may be left in-situ to avoid unnecessarily disturbing the seabed (i.e. where marine habitat has formed). This could include scour protection associated with the WTG foundations and sections of the Offshore Cable. The potential for infrastructure to remain in-situ will be confirmed through consultation on the Decommissioning Programme to ensure the most suitable approach is taken.	The scenario which represents the maximum level of infrastructure to be decommissioned. Decommissioning is likely to include removal of all of the WTG components and part of the foundations (those above seabed level) and removal of all other

Offshore Project Phase and Activity/Impact)	Maximum Design Scenario	Justification
	At this stage it is unconfirmed which components (if any) would remain in-situ, however, under the maximum design scenario for reduction in access to, or exclusion from established fishing grounds during decommissioning it has been assumed that all infrastructure would be removed.	surface infrastructure. Decommissioning activities are expected to occur with a lower intensity than those during construction, as such, construction activities represent a MDS. The magnitude of impact from decommissioning is predicted to be equivalent to or lower than that of the construction phase. This is because, unlike construction, seabed clearance is not expected to be required for foundation installation or along cable routes. Any seabed clearance during decommissioning is likely to be limited to the placement of jack-up vessel legs.
Reduction in access to, or exclusion from established fishing grounds in the OCAS.	The MDS used for this assessment is identical to the MDS for the Offshore Project decommissioning phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	The MDS used for this assessment is identical to the MDS for the Offshore Project decommissioning phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Displacement or disruption of commercially important fish and shellfish resources.	The MDS used for this assessment is identical to the MDS for the Offshore Project decommissioning phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity.	The MDS used for this assessment is identical to the MDS for the Offshore Project decommissioning phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Additional steaming to alternative fishing grounds - all other fleets.	The MDS used for this assessment is identical to the MDS for the Offshore Project decommissioning phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	
Physical presence of infrastructure leading to gear snagging.	The MDS used for this assessment is identical to the MDS for the Offshore Project decommissioning phase '*Reduction in access to, or exclusion from established fishing grounds within the Array Area*' pathway above.	

21.7.2 EMBEDDED MITIGATION MEASURES

21.7.2.1 As part of the Offshore Project design process, a number of embedded mitigation measures have been adopted to reduce the potential for impacts on Commercial Fisheries and these have evolved over the development process as the EIA has progressed and in response to consultation.

21.7.2.2 The embedded mitigation measures also include those that have been identified as good or standard practice and include actions that would be undertaken to meet existing legislation requirements. As there is a commitment to implementing the embedded mitigation, and also to various standard sectoral practices and procedures, they are considered inherently part of the design of the Offshore Project and are set out in this EIAR.

21.7.2.3 **Table 21-11** sets out the relevant embedded mitigation measures within the design and how these affect the Commercial Fisheries assessment.

Table 21-11: Relevant Commercial Fisheries embedded mitigation measures

ID	Environmental measure proposed	Project Phase Measure Introduced	How the measure will be secured	Relevance to Commercial Fisheries assessment
M002	A Cable Installation Plan will be produced to confirm routing, method of installation and aspects such as target Depth of Burial and need for/location of/type of external cable protection. This Plan will also contain the outputs of a formal Cable Burial Risk Assessment (CBRA). Data from the project-specific geophysical surveys will be used to identify the preferred route, with the use of natural crevasses or channels within the bedrock proposed, where feasible, and areas of thicker Quaternary sediments identified (to maximise opportunities for cable burial).	Pre-construction, construction	Secured in the Section 36 Consent and/or Marine Licence conditions. Details will be provided within the Cable Installation Plan.	Time delay between sequential cable installation operations (e.g. cable-lay and post-lay protection), shall be minimised to as short as reasonably practicable, to minimise seabed disturbance and cable exposure that could interfere with fishing gear or activities.
M004	Accidental release of construction material and/or litter to be addressed via the development of procedures to retrieve the accidental deposit of an object at sea.	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine License.	To maintain navigational safety and reduce risk of gear becoming lost or damaged due to snagging.
M006	An Invasive Non-Native Species (INNS) Management Plan will be developed prior to commencement of construction (building on the **INNS Management Plan, Volume 3**) in compliance with legislative requirements and/or best practice standards and guidance and adhered to.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence conditions. Details will be provided within the INNS Management Plan.	Promote co-operation with fishing activities, reduce the risk of impacts on target species and prevents ecological changes that could affect fish habitats
M010	Compliance with MGN 654 and its annexes including development and implementation of a Search and Rescue (SAR) Checklist, Emergency Response Cooperation Plan (ERCOP) and guard vessels as required by risk assessment.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence conditions. Details will be provided within the ERCOP.	To ensure navigational safety of both Offshore Project and fishing vessels and maintain good lines of communication between contractors and fishing vessels during offshore operations, as supported by appropriate offshore fisheries liaison where appropriate.
M011	The Offshore Project inclusive of surface piercing structures and subsea cables will be appropriately charted on Admiralty and aeronautical charts, and information on structure positions and heights will be provided to the UK Hydrographic Office (UKHO).	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine License.	To ensure navigational safety and minimise risk of gear snagging, 'as-laid' co-ordinates of the cable route shall be recorded and submitted to the UKHO, KIS-ORCA Service and the SFF Horizon Watch Alerts (SFF Services Limited, 2025) and communicated directly to fishing organisations in a timely manner. Sufficient detail will be shared to ensure navigational safety and inform safe fishing operations. 'As-laid' cables shall be marked on Admiralty Charts and fisherman's awareness charts (paper, electronic and plotter format). 'As laid' co-ordinates of the cable route will be updated if future changes are identified, for example during post-construction surveys.
M012	Timely and efficient distribution of Notices to Mariners (NtMs), Kingfisher notifications, and other navigational warnings of the position and nature of works associated with the Offshore Project, inc information for vessel routes, timings and locations, safety zones (around surface piercing infrastructure) and advisory passing distances. Physical notices will be places at marinas and harbours in the vicinity of the Offshore Project and final locations of installed infrastructure will be charted and distributed to recreational clubs.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the requirement for notifications and promulgation of information and will be set out within the NSVMP.	To ensure that the fishing industry is fully informed in advance of any offshore activities. Information will be circulated via NtMs and the Seafish "Kingfisher" system, and distributed by the FIR and OFLOs.

ID	Environmental measure proposed	Project Phase Measure Introduced	How the measure will be secured	Relevance to Commercial Fisheries assessment
M013	Surface piercing structures - application for safety zones of up to 500 m during construction and periods of major maintenance, and up to 50 m pre-commissioning.	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine License.	To ensure navigational safety and minimise risk, 500 m safety zones will be implemented around the outer edge of the proposed Wind Turbine Generators (WTG) (and offshore substation platform(s) if required) during construction. A 50 m pre-commissioning safety zone will also be implemented at infrastructure locations where construction is not on-going, prior to wind farm commissioning. During the O&M phase, 500 m operational safety zones around the location of any major maintenance activities. The duration of safety zones will be monitored to assess the potential for ongoing impacts to fisheries and introduce adaptive mitigation measures, if required.
M014	Marking and lighting of the Array Area in agreement with Northern Lighthouse Board (NLB) and as per the requirements of International Association of Lighthouse Authorities (IALA) Recommendation O-139 (IALA, 2021a) and Guidance G1162 (IALA, 2021b). This will include a buoyed construction area.	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine License.	To ensure navigational safety and minimise risk of gear snagging, adequate navigational markers (including lighting), in accordance with the most recent relevant industry guidance will be ensured through preparation of an Aids to Navigation Management Plan and in consultation with fishing organisations.
M015	Compliance of all Offshore Project vessels with international marine regulations as adopted by the Flag State, notably the International Regulations for Preventing Collisions at Sea (COLREGs) (IMO, 1973/1977) and the International Convention for the Safety of Life at Sea (SOLAS) (IMO, 1974).	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine License.	To ensure navigational safety of both Project and fishing vessels and maintain good lines of communication between contractors and fishing vessels during offshore operations.
M016	Wind turbines blade clearance of at least 28.33 m above Mean High Water Springs (MHWS) (30 m above Mean Sea Level (MSL)).	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine License.	Promote co-operation with fishing activities, ensures sufficient clearance for fishing vessels and safe transit beneath turbine. DSLP will include final details which will be shared with relevant fisheries organisations for review.
M019	A final Offshore Environmental Management Plan (OEMP) will be developed prior to commencement of construction (building on **Outline Offshore EMP, Volume 3**) in compliance with legislative requirements and/or best practice standards and guidance and adhered to.	Pre-construction, construction	Secured in the Section 36 Consent and/or Marine Licence via the condition for an OEMP to be submitted to MD-LOT for approval.	To ensure that the fishing industry is fully informed in advance of any offshore activities. Information will be circulated and distributed by the project FIR and CFLO. This includes circulation of the OEMP with the fishing industry before it is finalised. The OEMP will integrate mitigation measures outlined in the FMMCP thus ensuring both plans are consistent and integrate fisheries considerations into broader environmental management procedures.
M020	A Decommissioning Plan will be developed prior to the construction of the Project in compliance with legislative requirements and/or best practice standards and guidance and adhered to.	Decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for a Decommissioning Plan to be submitted to MD-LOT for approval and the Energy Act 2004.	To ensure navigational safety and minimise risk of gear snagging and to satisfy the requirements of the Energy Act 2004. Early engagement and coordination with the fishing industry will be undertaken to inform the Decommissioning Plan. The plan will also provide information to the fishing industry on restoration of the marine environment and information to ensure safe fishing access post-decommissioning.

ID	Environmental measure proposed	Project Phase Measure Introduced	How the measure will be secured	Relevance to Commercial Fisheries assessment
M021	Adherence to requirements of the International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78/. Best practice techniques employed through all phases of the Project, and measures provided in a Marine Pollution Contingency Plan (MPCP) (see **MPCP, Volume 3**). All vessels associated with the Project will comply with IMO/MCA codes for prevention of oil pollution and, where appropriate, will have onboard Shipboard Oil Pollution Emergency Plans (SOPEPs) (i.e. vessels over 400 gross tonnes (GT)).	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence conditions. Details will be provided within the MPCP.	Provides a plan for clear and rapid reporting within the fishing industry which will, reduce the risk of impacts on target species and mitigate potential impact on the fishing industry. The MPCP will be shared for review with fishing organisations and if a pollution event occurs at any stage of the Offshore Project, information will be distributed within the fishing industry.
M022	A final Navigational Safety and Vessel Management Plan (NSVMP) will be developed prior to commencement of construction (building on the **Outline NSVMP, Volume 3**) in compliance with legislative requirements and/or best practice standards and guidance and adhered to.	Pre-construction, construction	Secured in the Section 36 Consent and/or Marine Licence via the condition for an NSVMP to be submitted to MD-LOT for approval.	To ensure navigational safety and minimise risk of gear snagging, adequate navigational markers (including lighting), in accordance with the most recent relevant industry guidance will be ensured through preparation of an Aids to Navigation Management Plan and coordinated with the fishing industry. The plan will consider potential disruption to local fishing operations to ensure a collaborative approach.
M024	Dedicated risk assessment post consent if a location within Loch Roag is planned to be used as a base port taking account of vessel traffic in Loch Roag, full details of planned project vessels, their movements, and bases within Loch Roag, plus any impact on use of existing AtoNs within Loch Roag.	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine License	Promote co-operation with fishing activities by minimising spatial overlap with fishing grounds through engagement with local fishermen and harbour authorities.
M026	A Fisheries Mitigation, Monitoring and Communication Plan (FMMCP) (building on **FMMCP, Volume 3**) will be developed in compliance with legislative requirements and/or best practice standards and guidance prior to the operation of the Project and adhered to.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	To establish effective mitigation measures and with detailed adaptive management strategies to maintain navigation safety, co-operation with fisheries, dissemination of information and ensure engagement between the fishing industry and the Applicant to address fisheries-related impacts across all Offshore Project phases.
M027	Establishment and participation in a Project specific Commercial Fisheries Working Group (CFWG) will be undertaken to facilitate liaison between the Offshore Project and the wider fishing community.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	The participation in a CFWG is a convenient way of meeting all fisheries stakeholders on a regular basis and disseminating information. Meeting agendas, minutes and actions will be shared in a timely manner with attendees and the CFWG will have access to all relevant Offshore Project data, such as cable routing information. Promotes collaboration and early resolution of potential conflicts with the fishing community.
M028	As outlined in the **FMMCP, Volume 3**, a Company Fisheries Liaison Officer (CFLO), Fishing Industry Representative (FIR), and Offshore Fisheries Liaison Officer(s) (OFLOs) will be appointed prior to commencement of development to liaise with local, regional and national fishing organisations, as well as individual fishers on offshore activities undertaken in relation the Offshore Project.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	To maintain effective communications between the commercial fishing industry and the Applicant. The CFLO, FIR and OFLOs will be appointed prior to construction and will have clearly defined roles. An independent FIR will be appointed in consultation with the fishing industry to ensure impartiality. Contact details for the CFLO, FIR and OFLOs will be circulated within the fishing industry. Preparation and dissemination of project information via Notices to Mariners (NtM) and Notices to Fishermen (NtF).

ID	Environmental measure proposed	Project Phase Measure Introduced	How the measure will be secured	Relevance to Commercial Fisheries assessment
M029	A Marine Coordination Centre will be established to monitor all vessel activity (Project, fishing and other maritime vessels), issue Notices to Mariners, and serve as a contact point for all maritime stakeholders.	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine Licence.	To maintain effective communications between the fishing industry and the Applicant and ensure that the fishing industry is fully informed in advance of any offshore activities. Monitoring of fishn ing vessel activities will ensure information is shared with all relevant parties including fishing vessels not legally required to operate Automatic Identification System (AIS), thus maintaining navigational safety.
M030	Suitable implementation and monitoring of subsea cable burial, scour protection and cable protection in line with MGN 654 (via burial, or external protection where adequate burial depth as identified via risk assessment is not feasible). Surveys will be coordinated with the fishing industry, and results will be shared to support collaborative engagement and minimise conflict.	Pre-construction, construction, O&M and decommissioning	To be secured through a condition of the Section 36 consent and/or Marine Licence.	Cable burial will be prioritised where ground conditions allow to minimise external cable protection where possible to reduce snagging risks. Time delay between sequential cable installation operations (e.g. cable-lay and post-lay protection), shall be minimised to as short as reasonably practicable, to minimise duration of disruption to commercial fishing activity in the area of the Export Cable(s). In line with M011, cable route information will be shared with the fishing industry in a timely manner to reduce snagging and gear loss by maintaining awareness of cable locations and protection levels.
M032	A Design Specification Layout Plan (DSLP) will be developed and shared with commercial fisheries stakeholders through the Commercial Fisheries Working Group.	Pre-construction, construction	Secured in the Section 36 Consent and/or Marine Licence conditions via the condition for a DSLP to be submitted to MD-LOT for approval.	To maintain navigational safety and reduce risk of gear becoming lost or damaged due to snagging the DSLP will include sufficient detail of Offshore Project infrastructure and will be shared with fishing organisations. Any changes to the DSLP will be communicated with fishing organisations in a timely manner to enable updates to the FMMCP.
M033	A Lighting and Marking Plan (LMP) will be developed prior to commencement of construction (building on the **Outline LMP, Volume 3**) in compliance with legislative requirements and best practice standards and guidance and adhered to.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence conditions via the condition for a LMP to be submitted to MD-LOT for approval.	Maintains visibility and navigational safety, reducing risk to fishing operations and search and rescue operations in accordance with the most recent relevant industry guidance through preparation of an LMP. Lighting and marked areas will be monitored throughout the Offshore Project to maintain navigational safety. The LMP will include sufficient lighting and marking details to ensure maximum visibility for fishing vessels. The LMP will be shared with fishing organisations and specific lighting and marking details will also be distributed on NtMs and NtFs, and Kingfisher bulletin.
M034	Information on post construction geophysical surveys will be shared with Commercial Fisheries Working Group to communicate any changes to relocated seabed materials related to the project construction to reduce snagging risk.	Construction, O&M	Secured in the Section 36 Consent and/or Marine Licence conditions, as detailed within the FMMCP.	Promote co-operation with fishing activities, reduce the risk of entanglement and mitigate potential loss of damage to fishing gear and safety concerns. In the event of fouling of fishing gear, the primary aim is to avoid danger to the vessel, those on board, and any infrastructure that the fishing gear may have fouled

ID	Environmental measure proposed	Project Phase Measure Introduced	How the measure will be secured	Relevance to Commercial Fisheries assessment
M035	Desk based monitoring of fishing operations surrounding the Offshore Project and periodic assessment of fisheries activity data pre, during and post construction.	Pre-construction, construction, O&M	Secured in the Section 36 Consent and/or Marine Licence conditions, as detailed within the FMMCP.	To maintain a precise and up to date understanding of fishing activities in zones pertinent to the Offshore Project and revise the FMMCP as appropriate by adaptive management measures. To ensure transparency, monitoring reports will be shared with fishing organisations and the CFWG.
M036	The Project will only install Wind Turbine Generators and Offshore Substation Platform (if required) above sea infrastructure within the Turbine Area.	Pre-construction, construction, O&M	To be secured through a condition of the Section 36 consent and/or Marine Licence.	Provides economic benefit and minimises conflict with the local fishing fleet. All infrastructure will be charted, and information of Offshore Project infrastructure locations will be disseminated in line with M011.
M037	Use of local tour operator vessels or fishing vessels that meet relevant safety requirements, where possible to assist future Project activities, such as guard vessel opportunities.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence conditions, as detailed within the FMMCP.	To facilitate safe offshore activities by communicating with other sea users and exchange information on fishing activity and static fishing gear locations to reduce damage to fishing gear and maintain fishing vessel safety.
M038	Adherence to best practice guidance with regards to damage or loss of fishing gear that is attributable to the Offshore Project.	Pre-construction, construction, O&M and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Provides clarity on incident reporting and supports fair handling of gear-loss claims. In the event of fouling of fishing gear, the primary aim is to avoid danger to the vessel, those on board, and any infrastructure that the fishing gear may have fouled.

This page has intentionally been left blank

21.7.3 REFINED OFFSHORE CABLE AREA OF SEARCH

21.7.3.1 During the EIA process the OCAS was refined in response to key fishing grounds located in the inshore area (for further information see **Chapter 4: Consideration of Alternatives, Volume 1a**). This is considered an embedded measure. The OCAS was reduced from an area of 90.6 km^2 to 47.0 km^2 i.e., a reduction of 48% area (**Figure 21.5, Volume 2b**). The design parameters of length of Array Cables to Landfall, up to 12 Array Cables to Landfall, surface laid cable post horizontal directional drilling (HDD) exit points and intermittent stabilisation using rock bags remain as described in **Table 21-10**, with all of these parameters contained within this smaller area.

21.7.3.2 **Figure 21.5, Volume 2b** illustrates the refined OCAS together with the previously defined wider area for comparison.

21.7.3.3 The design change has been driven by the inshore fisheries mapping presented in **Figure 21.6, Volume 2b**, which integrates fishing vessel plotter data with AIS-derived analysis of individual potting vessel activity.

21.7.3.4 The refinement was initially informed by analysis of AIS and plotter data made available through the Fisheries Liaison Officer (FLO), gathered during one-to-one discussions with individual fishers operating within the inshore area. This data identified core grounds, with the green-shaded area in **Figure 21.6, Volume 2b**, indicating the most intensively used zones by representative potting vessels. However, subsequent consultation was undertaken through a broader group meeting involving a wider range of stakeholders, including additional local fishers, the Outer Hebrides Inshore Fisheries Group, and the Western Isles Fishermen's Association (as per **Table 21-2**). During this meeting, fishers provided verbal descriptions of more extensive fishing grounds extending beyond those captured in the initial datasets. While complete avoidance of all potential fishing grounds is not feasible, the refinement nonetheless represents a significant reduction in overall area and has been undertaken to minimise overlap with the most intensively used zones, where practicable.

21.8 ASSESSMENT OF EFFECTS: CONSTRUCTION PHASE

21.8.1 REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS WITHIN THE ARRAY AREA

21.8.1.1 During the construction phase of the Array Area, including up to 60 WTGs, 1 OSP, and 180 km length of Array Cables, commercial fisheries will be prevented from fishing where construction activities are taking place, plus up to 500 m safety zones around infrastructure under construction or up to 500 m advisory exclusion zones for mobile installation vessels. The total construction duration for the offshore infrastructure will be up to 5 years, with a number/range of construction activities being undertaken simultaneously across the site.

21.8.1.2 The WTG have fixed gravity based jacket foundations with a total seabed footprint for 60 WTG of 661,500 m^2. Boulder clearance covering an area of up to 3,600,000 m^2 may be required.

21.8.1.3 The Offshore Project has up to 180 km of Array Cables within the Array Area and a total of 350 km length of all Offshore Cables, including Array Cables and Array Cables to Landfall within the OCAS. Across the 350 km route, this equates to a total disturbed area of 8.75 km^2. The Offshore Cables within the OCAS are assessed in a separate impact. The Array Cables within the Array Area are assessed in this impact.

21.8.1.4 Installation method of Array Cables connecting WTGs is up to 100% surface laid cable with intermittent stabilisation using rock bags. The cable installation works will result in a seabed disturbance width of 2 m, comprising a 15 m cable corridor and 5 m-wide spoil heaps. Boulder clearance will be required along up to 100% of the route with a 15 m clearance width. Cable stabilisation / protection will be required along up to 100% of the route. The entire cable route may require a pre-lay gravel rock carpet, measuring 0.3 m in height and 3 m in crest width. Where additional protection is required, rock berms will be installed with a maximum height of 1.1 m, a base width of 5 m, a 1:3 slope, and a crest width of 3 m.

21.8.1.5 Based on the installation of surface laid Array Cables connecting WTGs and use of rock bags, it is assumed that fishing will not resume across areas with infrastructure above the seabed i.e., fishing will not resume within the vicinity of Array Cables, WTGs, and OSP infrastructure. Furthermore, no surface piercing infrastructure will be located outside the Turbine Area, although Array Cables may be located in this part of the Array Area.

21.8.1.6 Beyond these areas, the assessment assumes that while fishing will be possible within the Array Area where turbine spacing, turbine layout and array cabling routes allow productive grounds to be targeted, the extent of available fishable grounds within the Array Area will be limited by the presence of infrastructure including rock bags for cable stabilisation on the seabed and the presence of safety zones around infrastructure and advisory exclusion zones around vessels undertaking construction activities.

21.8.1.7 For clarity, a safety zone is a formally designated area established around offshore installations under the Energy Act 2004, following application to the Secretary of State. Within these zones, certain categories of vessels are permitted and activities are regulated to prevent collision risks and ensure maritime safety. Safety zones may only be applied on a temporary basis during construction or installation activities, such as the placement of turbines within an offshore wind array. Breaching an authorised safety zone is a legal offence and may result in substantial penalties. Any other informal spatial restriction implemented outside this statutory process is referred to as an advisory exclusion zone (around Offshore Project vessels undertaking construction activities), rather than a safety zone.

21.8.1.8 In addition, the individual decisions made by the skippers of fishing vessels with their own perception of risk will determine the likelihood of whether their fishing will resume within the Array

Area. Inclement weather will be a significant contributor to this risk perception. The type and dimension of fishing gear also influences the potential opportunities within the Array Area. For example, pelagic trawl, multi-rig otter trawl and demersal seine/fly shooting gear require a greater distance for safe operation and these gears are unlikely to target grounds in the vicinity of infrastructure. This is considered further within the magnitude assessment.

21.8.1.9 The maximum design scenario relating to reduction in access to, or exclusion from established fishing grounds within the Array Area during the construction phase are presented in **Table 21-10**.

Magnitude

21.8.1.10 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.8.1.11 This impact will lead to a reduction in access to or exclusion from fishing grounds and the fish and shellfish resources within the grounds overlapping the Array Area for a range of fishing opportunities during the period of construction, which will directly affect fleets over a medium-term duration. The impact is predicted to be intermittent with localised exclusion surrounding construction activities.

21.8.1.12 The impact is of relevance to a range of fishing fleets and is described below on a fishery-by-fishery basis. To distinguish from the inshore local fleet and offshore nomadic vessels, the assessment is separated for vessels less than 12 m and 12 m and over in length where appropriate.

Potting for lobster, crab and ballan wrasse

21.8.1.13 The local potting fleet (vessels <12 m) based at Carloway/*Càrlabhagh*, Lewis/*Eilean Leòdhais*, consists of 5-7 potting vessels primarily targeting lobster, as well as brown crab, other crab species and ballan wrasse. The local potters are most active in the inshore waters, extending activity out to and within the Array Area. The local potters may also occasionally deploy static nets to target ray species and turbot; this is not treated as a separate receptor because these vessels principally deploy potting gear. Other UK potting vessels (vessels ≥12 m) transit from Scottish mainland ports to target the northwest coast of Lewis/*Eilean Leòdhais*, offshore and across areas overlapping the Array Area, outside 6 nm.

21.8.1.14 The activity mapping of grounds targeted by the potting fleet indicate that large portions of the Array Area are targeted, specifically for lobster. The landing statistics indicate an average annual value of £1.5 million landed by potting vessels from the local Study Area, and an average annual value of approximately £200,000 landed into Carloway/*Càrlabhagh* (noting a peak of £360,000 in 2023). The area supports a relatively small number of local potting vessels that operate seasonally from Carloway/*Càrlabhagh*, relocating to operate from the east coast of Lewis/*Eilean Leòdhais* for the remainder of the year.

21.8.1.15 The construction of surface-laid Array Cables connecting WTGs, along with associated stabilisation using rock bags and pre-lay rock carpet, will result in long-term obstruction to potting activities across a wide seabed footprint. The construction of surface-laid Array Cables connecting WTGs, along with associated stabilisation using rock bags, will result in long term obstruction to potting activities across a wide seabed footprint where unprotected surface-laid cables and rock bags pose a snagging hazard. Potting gear, such as creels used to target lobster, brown crab and ballan wrasse, cannot be safely deployed or retrieved over cable routes where surface-laid cables and rock bags are present, effectively excluding the fleet from significant sections of their traditional grounds. The limited number of fishing vessel businesses based at Carloway/*Càrlabhagh* amplifies the vulnerability of the local fishing fleet. The loss of access to a moderate portion of traditional fishing grounds impacts not only individual livelihoods but also the viability of the port itself. In contrast to larger ports where vessels may relocate or diversify, Carloway/*Càrlabhagh*'s isolation and reliance on specific local grounds greatly constrain these options. Some of the vessel owners are also involved in mussel cultivation in nearby lochs, creating an interdependence between pot fishing and shellfish aquaculture. Loss of access to key fishing grounds therefore poses a cascading impact to overall business models.

21.8.1.16 During the construction phase, the potting fleet would not be able to access the areas undergoing construction activities plus 500 m safety zones. In the precautionary scenario that all surface piercing infrastructure was subject to safety zones simultaneously this would equate to 30% of the Array Area. For Offshore Project vessels installing the Array Cables connecting WTGs, a roaming area of 0.79 km^2 will be advised as an advisory exclusion zone. With a maximum of 35 construction vessels on site at any one time, this equates to 27.7 km^2 (i.e., 0.79*35) and 17% of the Array Area. In addition, in the instance that surface laid cable, and associated stabilisation is avoided by fishers, with a 50 m assumed safe operating distance from cables, this equates to a total area of 1.41 km^2 and approximately 1% of the Array Area. Therefore, during the construction period up to 49% of the Array Area will be assumed inaccessible to fishing and this inaccessible area will be dispersed and interspersed throughout the entire Array Area i.e., at WTG locations and along the network of Array Cables routes. Overall, the impact during construction is predicted to be of medium-term duration, to directly affect the fishery which has a medium value within the local Study Area, and medium effort within the Array Area and therefore, the magnitude is considered to be **Medium Adverse** for both the local potting fleet (vessels <12 m) and other UK potting vessels (vessels ≥12 m).

Potting for nephrops

21.8.1.17 Nephrops are targeted by creel fisheries across muddy habitats located on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch and South Minch areas. Nephrops are not targeted across the Offshore Project Boundary and therefore, the magnitude is considered to be **Negligible**.

Demersal trawl and seine fishery for monkfish, haddock, squid and mixed demersal finfish

21.8.1.18 The sea area northwest of Lewis/*Eilean Leòdhais* is known as the Hebrides Shelf Offshore Marine Region. This area comprises the Hebridean Slope and the Outer Hebrides Shelf Edge, which transition from relatively shallow continental shelf waters (~100-200 m depth) into the much deeper Rockall Trough, which is over 3,000 m deep and forms part of the Northeast Atlantic deep-sea system. This region includes deep, complex seabed topography with trenches, ridges, strong currents and temperature gradients which contribute to high biological productivity and support a range of commercial fisheries. A major monkfish fishery is targeted by demersal trawlers and demersal seine gear across this region. Monkfish is a high value species, caught as part of mixed fishery with haddock, megrim and saithe.

21.8.1.19 Within the regional Study Area, the demersal trawl and seine fishery for monkfish, haddock and mixed demersal finfish lands catches with a first sale value of approximately £4.95 million annually, including £35,000 annually landed from the local Study Area. The location of this demersal fishery is north, northwest and west of the Array Area. Demersal trawl and seine activity is not routinely recorded within the Array Area, as evidenced by VMS data for the UK and EU fleets and landing statistics for the local Study Area and therefore, the magnitude is considered to be **Low Adverse**.

Demersal trawl fishery for nephrops

21.8.1.20 Nephrops are targeted by demersal trawl fisheries, and to a lesser extent beam trawl fisheries, across muddy habitats located on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch and South Minch areas. Nephrops are not targeted across the Offshore Project Boundary and therefore, the magnitude is considered to be **Negligible**.

Pelagic trawl targeting mackerel, herring and horse mackerel

21.8.1.21 VMS spatial activity for pelagic trawl indicate that activity is focused along the Hebridean Slope, north and west of the Array Area. Occasional activity is identified through VMS to occur within the local Study Area, focused on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch. In the regional study area, an average annual value of £5 million is landed; including £40,000 from the local Study Area. While there may be occasional exploratory fishing within the Array Area by pelagic trawl, in general activity is focused on waters further offshore, following the mackerel migration routes from Shetland/*Sealtainn*, along the Hebridean Slope to the west coast of Ireland. Pelagic trawl activity is not routinely recorded within the Array Area, as evidenced by VMS data and landing statistics for the local Study Area and therefore, the magnitude is considered to be **Low Adverse**.

Handline targeting mackerel (and occasional blue fin tuna)

21.8.1.22 Handline fishing gear is frequently employed by vessels that are primarily engaged in potting fisheries. This gear type is used to target the highly seasonal mackerel fishery, which becomes viable as mackerel shoals migrate inshore during the warmer months, particularly from June-

August. These seasonal migrations bring mackerel in accessible proximity to the coast, enabling small-scale and inshore vessels to effectively exploit this opportunity. Available spatial data indicates that any handline activity is located very close inshore and does not overlap with the Array Area and therefore, the magnitude is considered to be **Low Adverse**.

Dredge for scallop

21.8.1.23 The scallop dredge fishery is well established on the east coast of Lewis/*Eilean Leòdhais*, in particular in inshore waters and in sandy gravel beds, as they provide suitable habitat for scallops. Key areas on the east coast of Lewis/*Eilean Leòdhais* include around the Shiant Isles/*Na h-Eileanan Mòra* and in the north, adjacent to North Tolsta/*Tolastadh bho Thuath*. The local Study Area has an annual average landed value of £151,000, with VMS spatial activity indicating all of the activity to occur on the east coast of Lewis/*Eilean Leòdhais* and not within the Array Area or Offshore Project Boundary. Activity across the Array Area would be exploratory and in frequent and therefore, the magnitude of impact is considered to be **Low Adverse** for the dredge fishery targeting scallop.

Commercial diving for shellfish

21.8.1.24 A small quantity of scallops (~£6,000 per annum) is landed by divers targeting very inshore areas on the east coast of Lewis/*Eilean Leòdhais*. Diving activity is also noted within the Loch Roag/*Ròg* system, west Lewis/*Eilean Leòdhais*, located south of and outside the Array Area. Activity across the Array Area would be exploratory and in frequent and therefore, the magnitude of impact is considered to be **Low Adverse** for the diving fishery targeting scallop.

21.8.1.25 Electrofishing is not commonly used for razor clams under standard scientific or commercial harvest conditions. However, there has been experimental use of electrofishing for razor clams in Scotland/*Alba*, including in some areas of the Outer Hebrides/*Na h-Eileanan Sia*. For context, electrofishing for razor clams was banned in Scotland/*Alba* due to environmental and ethical concerns. However, in 2017, the Scottish Government initiated a scientific trial in selected areas, including the Outer Hebrides/*Na h-Eileanan Sia*, to explore sustainable electrofishing techniques. Permits are required and managed by the Marine Directorate and locations generally remain confidential.

21.8.1.26 Hand gathering by divers is an alternative and more selective method for harvesting razor clam, which are targeted in subtidal sandy areas. The habitat type targeted by the razor clam fishery is absent from the Array Area, which is instead characterized by hard, rocky substrates. Based on the absence of suitable habitat, it is assumed that the fishery is not targeted across the Array Area and therefore the magnitude is considered to be **Low Adverse**.

Set nets targeting turbot and monkfish

21.8.1.27 Landing statistics indicate occasional activity within the local Study Area for a set net fishery targeting turbot, monkfish, ray species and other demersal species. Consultation with the local FIR and port visits to Carloway/*Càrlabhagh* indicate that this has become an important, highly seasonal

fishery. Nets are set on the seabed to target demersal species that inhabit the seabed, providing high value seasonal landings of high quality fish and rays. Spatial activity is not available for this fishery and therefore, on a precautionary basis the magnitude is considered to be **Medium Adverse**.

All other fisheries

21.8.1.28 Landing statistics indicate occasional activity within the local Study Area for longline targeting hake and ling. Available spatial evidence indicates that this fishery do not occur across the Array Area based on data for under 12 m Scottish vessels and therefore the magnitude is considered to be **Low Adverse**.

Sensitivity or value of receptor

21.8.1.29 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.8.1.30 The fishing fleets operating in the local Study Area primarily land their catch at the ports of Carloway/*Càrlabhagh* and Bernera/*Beàrnaraigh*, for vessels operating on the west coast of Lewis/*Eilean Leòdhais*; and at the ports of Stornoway/*Steòrnabhagh* and Back/*Am Bac*, for the vessels operating on the east coast of Lewis/*Eilean Leòdhais*, which together account for approximately 81% of the landed value from the area. While these fleets may have access to alternative fishing grounds beyond the local Study Area, operational limitations such as fuel costs, travel distances, and weather conditions mean that they retain a strong dependence on the local grounds.

21.8.1.31 Potting is assessed as having **High** sensitivity for vessels <12 m in length, due to predominantly targeting local inshore grounds and limited ability to relocate to alternative grounds. Potting vessels operating off the east coast of Lewis/*Eilean Leòdhais* are already required to adjust their activities in response to seasonal closures and fisheries restrictions, indicating a level of operational flexibility. However, this also makes them more sensitive to additional impacts occurring across the fishing season on the west coast of Lewis/*Eilean Leòdhais*. Given this disproportionate dependency and the limited resilience of the local infrastructure, the fleet is considered to have a high sensitivity to the impact.

21.8.1.32 Vessels 12 m and over in length targeting lobster and crab using pots are no longer permitted to operate within the 6 nm limit, within which the majority of the Array Area is located. Due to their nomadic operating patterns and greater range capabilities, these fleets are able to relocate to alternative offshore grounds beyond the inshore zone. Consequently, their sensitivity to spatial displacement or exclusion within the Offshore Project area is assessed as **Medium**.

21.8.1.33 For vessels potting for nephrops, sensitivity is assessed as **Medium**. Although this fleet uses similar static gear, it predominantly targets muddy sediment habitats, which do not typically occur within the Offshore Project Area. Nephrops effort is therefore less likely to overlap spatially with the proposed infrastructure. However, as part of the broader creel fleet, Nephrops vessels may still be

indirectly affected by navigational constraints or access limitations, particularly when operating mixed gears.

21.8.1.34 Set nets (gillnets and tangle nets) are assessed as having **High** sensitivity. These gears are typically deployed on a highly seasonal basis and are set statically on the seabed for short periods to soak before retrieval. This mode of operation increases their susceptibility to disruption or loss from seabed infrastructure, safety zones, or advisory exclusion zones. Set-net vessels commonly operate within the same small-scale fleet as potters and often use multiple gear types throughout the year, meaning that displacement or spatial conflict affecting one gear type can directly impact broader operational viability and income.

21.8.1.35 Handlining is assessed as having **Medium** sensitivity. Although it is similarly confined to very local, inshore fishing areas, the gear used does not interact with the seabed, significantly reducing vulnerability to snagging hazards and direct effects from seabed infrastructure such as cables or rock protection. However, spatial exclusion and disruption to navigational access can still affect operational viability.

21.8.1.36 Commercial diving is assigned **High** sensitivity. This method is typically restricted to very specific, shallow inshore grounds. The spatially confined nature of these fishing areas leaves little flexibility for relocation, resulting in a heightened vulnerability to spatial exclusions or seabed infrastructure.

21.8.1.37 In contrast, demersal trawl/seine, dredge and pelagic trawl fisheries are considered to have **Low** sensitivity. While these gears are susceptible to snagging hazards posed by surface-laid cables and rock bags, and their operations may be affected by obstructions, they generally have broader spatial ranges and a greater capacity to adapt by relocating to alternative fishing grounds. In addition, the Offshore Project area is not typically targeted by these gears.

Significance of effect

21.8.1.38 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) include the FMMCP (M026) and participation in the CFWG (M027), alongside adherence to the Development Specification and Layout Plan (M032), to reduce the potential impact pathway of restricted access and spatial exclusion of fishing vessels within the Array Area through coordinated engagement and advance dissemination of final turbine and cable layout information via the CFLO, OFLO, and FIR.

21.8.1.39 The significance of effect of reduction in access to, or exclusion from established fishing grounds within the Array Area to commercial fisheries receptors during the construction phase is summarised in **Table 21-12**.

Table 21-12: Significance of effect of reduction in access to, or exclusion from established fishing grounds within the Array Area to commercial fisheries receptors during the construction phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting <12 m for lobster, brown crab, ballan wrasse etc	Medium Adverse	High	M026 M027 M028 M013 M029 M032 M036	**Moderate Adverse**	**Significant**	Local inshore potting vessels (5-7 boats from Carloway/*Càrlabhagh*) will experience significant exclusion from traditional grounds due to safety zones around turbines and the presence of surface-laid cables with rock bag stabilisation. These pose snagging hazards that prevent safe deployment of pots. Up to 49% of the Array Area may be inaccessible during construction, with long-term obstructions along cable routes. The small number of locally dependent vessels, limited relocation options, and interdependence with shellfish aquaculture heighten the vulnerability of this fleet.
Potting >12 m for lobster, brown crab, ballan wrasse etc	Medium Adverse	Medium		**Moderate Adverse**	**Significant**	Larger offshore vessels (>12 m) targeting lobster and crab occasionally operate in the Array Area but are generally capable of relocating to alternative offshore grounds. They will face temporary displacement from fishing grounds within the Array Area during construction due to safety zones, exclusion zones and snagging risks from rock bags and surface-laid cables. Note that the >12 m vessels are prohibited from operating from 0 to 6 nm; and operate from 6 nm and beyond. In terms of area, approximately 17% of the Array Area extends beyond 6 nm.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting for nephrops	Negligible	Medium		Negligible	Not Significant	Nephrops potting occurs primarily over muddy habitats east of Lewis/*Eilean Leòdhais*, outside the Offshore Project boundary. No direct overlap with the Array Area is expected.
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Low		Minor Adverse	Not Significant	The main trawl and seine grounds for monkfish and mixed demersal species lie north and west of the Array Area, beyond routine fishing zones. Occasional overlap is possible but not established. The Array Area is not a key fishing ground for this fleet; hence, disruption and displacement will be minimal.
Demersal trawl fishery for nephrops	Negligible	Low		Negligible	Not Significant	Nephrops trawling occurs on muddy substrates to the east of Lewis/*Eilean Leòdhais* and within the Minch/*Mhaoil*, not in the Array Area. No direct spatial overlap is anticipated.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	Pelagic activity is concentrated along the Hebridean Slope, with occasional exploratory fishing within the local Study Area. The Array Area is not routinely targeted, and effects are expected to be minimal due to mobility of pelagic fleets and limited spatial overlap.
Handline targeting mackerel (and	Low Adverse	Medium		Minor Adverse	Not Significant	Handline fisheries are confined to very nearshore areas, mainly along the east coast of Lewis/*Eilean Leòdhais*. The Array Area lies beyond normal operational range, and no overlap is expected.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
occasional blue fin tuna)						
Dredge for scallop	Low Adverse	Low		Minor Adverse	Not Significant	Scallop dredging is established along the east coast of Lewis/*Eilean Leòdhais* in sandy gravel habitats absent from the Array Area. Any interaction would be minimal and exploratory.
Set nets for white fish and rays	Medium Adverse	High		Moderate Adverse	Significant	Seasonal set-net fisheries targeting turbot, monkfish and rays operate near Carloway/*Càrlabhagh* and may overlap with parts of the Array Area. Nets are static and prone to snagging on surface-laid cables or rock protection, restricting access and posing gear-loss risks. These vessels have limited relocation options and high dependency on local grounds.
Commercial diving for shellfish	Low Adverse	High		Minor Adverse	Not Significant	Diving for scallop occurs in shallow inshore waters outside the Array Area. Occasional exploratory activity could be affected but at a minimal scale.
All other gears and fisheries	Low Adverse	Medium		Minor Adverse	Not Significant	Occasional longlining and other minor fisheries have limited spatial overlap with the Array Area. Their wide distribution and mobility reduce susceptibility to local displacement.

This page has intentionally been left blank

Further environmental mitigation

21.8.1.40 Given the potential for the reduction in access to, or exclusion from established fishing grounds within the Array Area to result in impacts that are predicted to be significant in EIA terms, the following further environmental mitigation relevant to Commercial Fisheries, shown in **Table 21-13,** has been identified.

Table 21-13 Relevant Commercial Fisheries further mitigation measures

Commitment no.	Proposed Commitment	Project Phase Measure Introduced	Justification	How the measure will be secured
A001	The use of rock bags or rock berms for Offshore Cable protection within the Array Area will be limited to within 50 m of WTG and Offshore Substation Platform infrastructure.	Pre-construction, construction, O&M	Promote co-operation with fishing activities, reduce the risk of entanglement and mitigate potential loss or damage to fishing gear and safety concerns.	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.
A002	The Offshore Project will endeavour to route the Offshore Cables network to maximise resumption of fishing were possible.	Pre-construction, construction, O&M	Promote co-operation and minimise conflict with fishing activities, by engaging with fisheries and designing cable routes to maintain, or restore access to fishing grounds during the O&M phase of the Offshore Project.	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.
A003	Disruption Agreements will be implemented to coordinate and agree appropriate co-operation and establish evidence-based disruption payments to fishermen, where identified as significant within the EIA.	Pre-construction, construction and decommissioning	Provides a fair and transparent mechanism to compensate fishers for demonstrable and evidence-based disruption, supporting socio-economic resilience and minimises conflict.	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.

Significance of residual effect

21.8.1.41 Potting for lobster, crab and ballan wrasse (under and over 12 m fleets) and set nets for white fish and rays: The additional mitigation presented **Table 21-13** will maximise the opportunity for fishing to resume within the Array Area during the construction process and will appropriately mitigate short-term disruption through establishment of disruption agreements. Based on the successful application of this additional mitigation, the residual effect of this impact during construction is reduced to Minor Adverse significance, which is **Not Significant** in EIA terms.

All other commercial fisheries receptors

21.8.1.42 The significance of residual effect remains as presented in **Table 21-12**, summarised as Minor Adverse to Negligible for all fleets, which is **Not Significant** in EIA terms.

21.8.2 REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS WITHIN THE OFFSHORE CABLE AREA OF SEARCH

21.8.2.1 The maximum design scenario relating to reduction in access to, or exclusion from established fishing grounds within the OCAS during the construction phase are presented in **Table 21-10**.

Magnitude

21.8.2.2 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.8.2.3 This impact will lead to a reduction in access to or exclusion from fishing grounds and the fish and shellfish resources within the grounds overlapping the OCAS for a range of fishing opportunities during the period of construction, which will directly affect fleets over a medium-term duration. The impact is predicted to be intermittent with localised exclusion surrounding construction activities.

21.8.2.4 The impact is of relevance to a range of fishing fleets and is described below on a fishery-by-fishery basis.

Potting (< 12 m) for lobster, crab and ballan wrasse:

21.8.2.5 The local potting fleet based at Carloway/*Càrlabhagh*, Lewis/*Eilean Leòdhais*, consists of 5-7 potting vessels primarily targeting lobster, as well as brown crab, other crab species and ballan wrasse. The local potters are most active in the inshore waters, specifically close to shore and across the entirety of the OCAS. Other UK potting vessels transit from Scottish mainland ports to target the northwest coast of Lewis/*Eilean Leòdhais*, these vessels may occasionally enter the inshore waters overlapping the OCAS but primarily target grounds further offshore (as assessed for the Array Area).

21.8.2.6 The landing statistics indicate an average annual value of £1.5 million landed by potting vessels from the local Study Area, and an average annual value of approximately £200,000 landed into Carloway/*Càrlabhagh* (noting a peak of £360,000 in 2023). The area supports a relatively small

number of local potting vessels that operate seasonally from Carloway/*Càrlabhagh*, relocating to operate from the east coast of Lewis/*Eilean Leòdhais* for the remainder of the year.

21.8.2.7 The maximum design scenario for the Array Cables to Landfall includes up to 12 cables running from the Array Area through the OCAS to the Landfall. For the purposes of the Commercial Fisheries assessment, these 12 Array Cables to Landfall are assumed to be spread or fanned across the entirety of the OCAS, thereby causing the greatest reduction in access across the widest area.

21.8.2.8 The construction of 12 surface-laid Array Cables to Landfall, along with associated stabilisation using rock bags and pre-lay rock carpet, will result in long-term obstruction to potting activities across a wide seabed footprint. Potting gear, such as creels used to target brown crab, lobster, and ballan wrasse, cannot be safely deployed or retrieved over cable routes where stabilisation materials are present, effectively excluding the fleet from significant sections of their traditional grounds. As described for the Array Area impact above, the limited number of fishing vessel businesses based at Carloway/*Càrlabhagh* amplifies the vulnerability of the local fishing fleet. The loss of access to a moderate portion of traditional fishing grounds impacts not only individual livelihoods but also the viability of the port itself. In contrast to larger ports where vessels may relocate or diversify, Carloway/*Càrlabhagh*'s isolation and reliance on specific local grounds greatly constrain these options. Some of the vessel owners are also involved in mussel cultivation in nearby lochs, creating an interdependence between pot fishing and shellfish aquaculture. Loss of access to key fishing grounds therefore poses a cascading impact to overall business models.

21.8.2.9 During the construction phase, the potting fleet would not be able to access the areas undergoing construction activities plus 500 m advisory exclusion zones from vessels undertaking construction activities, equating to a roaming area of 0.79 km^2. With a maximum of 35 construction vessels on site at any one time, this equates to 27.7 km^2 (i.e., 0.79*35) and 59% of the OCAS (which is 47 km^2). In addition, in the instance that surface laid cable and associated stabilisation is avoided by fishers, with a 50 m assumed safe operating distance from cables, this equates to a total area of 1.57 km^2 and approximately 3.3% of the OCAS spread out, or fanned, throughout the OCAS. Therefore, during the construction period up to 62% of the OCAS will be assumed inaccessible to fishing and this inaccessible area will be dispersed and interspersed throughout the entire OCAS i.e., further areas may be inaccessible dependant on the proximity available between Array Cables to Landfall.

21.8.2.10 In response to the potential impact of the construction of the OCAS to the local potting fleet, the OCAS has been refined and reduced as part of an embedded mitigation measure. This has reduced the area from 90.6 km^2 to 47 km^2 (an overall reduction of 48%) and avoided the key fishing grounds in the west of the original OCAS. This design change has been driven by inshore fisheries mapping shown in **Figure 21.6, Volume 2b**. Overall, the impact during construction is predicted to be of medium-term duration, to directly affect the fishery which has a medium value within the local Study Area, and medium effort within the OCAS and therefore, the magnitude is considered to be **Medium Adverse** for the local potting fleet (<12 m).

Potting (≥12 m) for lobster, crab and ballan wrasse:

21.8.2.11 The other UK potting vessels are understood to operate further offshore from the OCAS, as evidenced by AIS data. They may occasionally enter the OCAS, but focus effort in areas that overlap the Array Area and further offshore, and therefore the magnitude is considered to be **Low Adverse**.

Potting for nephrops:

21.8.2.12 Nephrops are targeted by creel fisheries across muddy habitats located on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch and South Minch areas. Nephrops are not targeted across the OCAS and therefore, the magnitude is considered to be **Negligible**.

Demersal trawl and seine fishery for monkfish, haddock, squid and mixed demersal finfish:

21.8.2.13 The sea area northwest of Lewis/*Eilean Leòdhais* is known as the Hebrides Shelf Offshore Marine Region. As described for the Array Area, a major monkfish fishery is targeted by demersal trawlers and demersal seine gear across this offshore region. Monkfish is a high value species, caught as part of mixed fishery with haddock, megrim and saithe. The location of this demersal fishery is north, northwest and west of the OCAS. Demersal trawl and seine activity is not routinely recorded within the OCAS, as evidenced by VMS data for the UK and EU fleets and landing statistics for the local Study Area and therefore, the magnitude is considered to be **Low Adverse**.

Demersal trawl fishery for nephrops:

21.8.2.14 Nephrops are targeted by demersal trawl fisheries, and to a lesser extent beam trawl fisheries, across muddy habitats located on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch and South Minch areas. Nephrops are not targeted across the OCAS and therefore, the magnitude is considered to be **Negligible**.

Pelagic trawl targeting mackerel, herring and horse mackerel:

21.8.2.15 As described for the Array Area, while there may be occasional exploratory fishing by pelagic trawl in the local Study Area, in general activity is focused on waters further offshore, following the mackerel migration routes from Shetland/*Sealtainn*, along the Hebridean Slope to the west coast of Ireland. Pelagic trawl activity is not routinely recorded within the OCAS, as evidenced by VMS data and landing statistics for the local Study Area and therefore, the magnitude is considered to be **Low Adverse**.

Handline targeting mackerel (and occasional blue fin tuna):

21.8.2.16 Handline fishing gear is frequently employed by vessels that are primarily engaged in potting fisheries. This gear type is used to target the highly seasonal mackerel fishery, which becomes viable as mackerel shoals migrate inshore during the warmer months, particularly from June-August. These seasonal migrations bring mackerel in accessible proximity to the coast, enabling small-scale and inshore vessels to effectively exploit this opportunity.

21.8.2.17 A significant proportion of the potting fleet opportunistically targets mackerel during this period using handlines. These vessels are typically not dedicated pelagic fishers but diversify their operations seasonally to include mackerel as a crucial supplementary catch. The revenue generated from mackerel fishing during these months is often a key component of their annual income, helping to offset periods of lower activity or lower returns in other parts of the year. It contributes to the economic viability and resilience of these inshore fishing businesses.

21.8.2.18 These vessels are known to operate seasonally within the OCAS, which overlaps with key areas of mackerel activity. While the overall spatial and temporal extent of the fishery may be limited, the economic and operational significance to a specific subset of the fleet is high, warranting recognition of the potential disruption and consequential impact.

21.8.2.19 Given the high dependency of local potters on this seasonal fishery, its timing-specific nature, and the notable contribution it makes to the annual economic viability of affected operators, the magnitude of impact is considered to be **Medium** Adverse.

Dredge for scallop:

21.8.2.20 The scallop dredge fishery is well established on the east coast of Lewis/*Eilean Leòdhais*, in particular in inshore waters and in sandy gravel beds, as they provide suitable habitat for scallops. As described for the Array Area, activity across the OCAS would be exploratory and infrequent and therefore, the magnitude of impact is considered to be **Low Adverse** for dredge targeting scallop.

Commercial diving for shellfish

21.8.2.21 Electrofishing and diving for razor clams and diving for scallop: electrofishing is not commonly used for razor clams under standard scientific or commercial harvest conditions. As described for the Array Area, based on the absence of suitable habitat, it is assumed that the fishery is not targeted across the OCAS and therefore the magnitude is considered to be **Low Adverse**. Diving for scallops occurs in sandy gravel beds, as they provide suitable habitat for scallops. As described for the Array Area, activity across the OCAS would be exploratory and infrequent and therefore, the magnitude of impact is considered to be **Low Adverse.**

21.8.2.22 All other fisheries: landing statistics indicate occasional activity within the local Study Area for set nets targeting ray species and longline targeting hake and ling. These fisheries are understood to not occur across the OCAS and the magnitude is therefore **Low**.

Sensitivity

21.8.2.23 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.8.2.24 The sensitivity is as described in paragraphs 21.8.1.30 to 21.8.1.37 and summarised as **High** for potting vessels <12 m targeting lobster, set nets and diving fisheries; **Medium** for other potting fleets (12 m and over targeting lobster and all vessels targeting nephrops), and handline and **Low** for all other commercial fishing fleets.

Significance of effect

21.8.2.25 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) include adherence to the FMMCP (M026) and implementation of the CFLO, OFLO, and FIR (M028), alongside the Cable Plan (M002), to reduce the potential impact pathway of spatial exclusion and disruption to inshore fishing activities within the OCAS through targeted liaison, route refinement, and proactive communication of installation schedules.

21.8.2.1 The significance of effect of reduction in access to, or exclusion from established fishing grounds within the OCAS to commercial fisheries receptors during the construction phase is summarised in **Table 21-14**.

Table 21-14 Significance of effect of Reduction in access to, or exclusion from established fishing grounds within the OCC AoS to commercial fisheries during the construction phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting <12m for lobster, brown crab, ballan wrasse etc	Medium Adverse	High	M026 M027 M002 M028 M029 M030 M010 M032	**Moderate Adverse**	**Significant**	Local inshore potting vessels (5–7 boats from Carloway/*Càrlabhagh*) operate extensively across the OCAS and will be directly affected by construction and cable-laying activities. Up to 62% of the OCAS may be inaccessible during construction due to advisory exclusion zones. Surface-laid cables, rock bags, and rock carpets will create long-term seabed obstructions, excluding potting gear from large sections of traditional grounds.
Potting >12m for lobster, brown crab, ballan wrasse etc	Low Adverse	Medium		Minor Adverse	Not Significant	Offshore potting vessels ≥12 m mainly operate further from shore, focusing on the Array Area and beyond. They may occasionally enter the OCAS, but overlap is limited. These fleets can relocate more readily to alternative grounds.
Potting for nephrops	Negligible	Medium		Negligible	Not Significant	Nephrops creeling is confined to muddy habitats east of Lewis and does not overlap with the OCAS, which comprises rocky substrates. No direct or indirect effects are expected.
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Low		Minor Adverse	Not Significant	Demersal trawl and seine activity is concentrated north and west of the OCAS. The area is not a recognised fishing ground for these gears. Construction exclusion zones are unlikely to affect the fishery.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Demersal trawl fishery for nephrops	Negligible	Low		Negligible	Not Significant	Nephrops trawling targets muddy sediments to the east of Lewis/*Eilean Leòdhais*, outside the OCAS. No spatial overlap is expected.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	Pelagic trawl activity occurs offshore along the Hebridean Slope following migratory routes. Only rare exploratory fishing may occur near the OCAS. The highly mobile nature of this fleet reduces vulnerability to temporary exclusion.
Handline targeting mackerel (and occasional blue fin tuna)	Medium Adverse	Medium		**Moderate Adverse**	**Significant**	Handlining for mackerel is a seasonal, economically important activity for small-scale potting vessels operating inshore and within the OCAS. Displacement during the summer migration period would remove an important supplementary income source.
Dredge for scallop	Low Adverse	Low		Minor Adverse	Not Significant	Scallop dredging occurs mainly along the east coast of Lewis/*Eilean Leòdhais* in sandy gravel habitats, which are absent from the OCAS. Any activity within the OCAS would be minimal and exploratory.
Set nets for white fish and rays	Medium Adverse	High		**Moderate Adverse**	**Significant**	Seasonal set-net fisheries targeting turbot, monkfish, and ray species overlap with the OCAS. Nets are static and vulnerable to snagging on cables and stabilisation materials. Limited relocation

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
						options and high economic dependency result in substantial sensitivity.
Commercial diving for shellfish	Low Adverse	High		Minor Adverse	Not Significant	Diving occurs in shallow sandy habitats generally absent from the OCAS. Occasional exploratory diving may be restricted during construction but on a negligible scale.
All other gears and fisheries	Low Adverse	Medium		Minor Adverse	Not Significant	Other minor fisheries such as longlining for hake and ling have no regular activity within the OCAS. Their spatial flexibility and broad operating areas reduce exposure to construction impacts.

This page has intentionally been left blank

Further Environmental Mitigation

21.8.2.2 Given the potential for the reduction in access to, or exclusion from established fishing grounds within the OCAS to result in impacts that are predicted to be significant in EIA terms, the following further environmental mitigation relevant to Commercial Fisheries, shown in **Table 21-15**, has been identified.

Table 21-15: Relevant Commercial Fisheries further mitigation measures

ID	Environmental Measure Proposed	Project Phase Measure Introduced	How the Environmental Measures will be Secured	Relevance to Fisheries Assessment
A002	The Offshore Project will endeavour to route the Offshore Cables network to maximise resumption of fishing were possible.	Pre-construction, construction	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Supports cooperation by designing cable routes to maintain or restore access to fishing grounds wherever feasible.
A003	Disruption Agreements will be implemented to coordinate and agree appropriate co-operation and establish evidence-based disruption payments to fishermen, where identified as significant within the EIA.	Construction and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Provides a fair and transparent mechanism to compensate fishers for demonstrable disruption, supporting socio-economic resilience and cooperation.

Significance of residual effect

21.8.2.3 Potting (<12 m vessels), set nets targeting white fish and rays and handline targeting mackerel (and occasional blue fin tuna): The additional mitigation presented **Table 21-15** will maximise the opportunity for fishing to resume within the OCAS during the construction process and will appropriately mitigate short-term disruption through establishment of disruption agreements. Based on the successful application of this additional mitigation, the residual effect of this impact during construction is reduced to Minor Adverse significance, which is **Not Significant** in EIA terms.

21.8.2.4 All other Commercial Fisheries receptors: The significance of residual effect remains as presented in **Table 21-14** summarised as Minor Adverse to Negligible for all fleets, which is **Not Significant** in EIA terms.

21.8.3 DISPLACEMENT LEADING TO GEAR CONFLICT AND INCREASED FISHING PRESSURE ON ADJACENT GROUNDS

21.8.3.1 Loss of access or exclusion from fishing grounds due to the Offshore Project, including the Array Area and OCAS, may lead to increases in fishing effort in other areas that may already be exploited thereby leading to increased pressure and gear conflict.

21.8.3.2 The maximum design scenario relating to displacement leading to gear conflict and increased fishing pressure on adjacent grounds during the construction phase are presented in **Table 21-10**.

Magnitude

21.8.3.3 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

Potting for lobster, crab and ballan wrasse (< 12 m fleet):

21.8.3.4 Conflict over diminished grounds may occur if displaced vessels operating mobile gear (e.g. dredge or demersal trawl) explore grounds traditionally fished by potters; and/ or displaced potting gear is relocated into other actively fished potting grounds.

21.8.3.5 Fisheries using mobile gear types, such as demersal trawl/seine fishery for monkfish, haddock, demersal trawl fishery for nephrops, pelagic trawl targeting mackerel, herring and horse mackerel and dredge for scallop, are not understood to actively target the Offshore Project Boundary. Consequently, both the likelihood of displacement of these mobile gears and the potential for interaction with potting gear are considered to be unlikely.

21.8.3.6 When considering the impact of potters being displaced into grounds already targeted by potters the following scenarios are feasible:

- Scenario 1: Alternative productive fishing grounds are available to relocate gear, in which case gear conflict and displacement effects will be low;
- Scenario 2: Alternative fishing grounds are available to relocate gear, but these are less productive than traditionally fished grounds, in which case there will be lower returns for similar effort and operational expense;
- Scenario 3: Alternative fishing grounds are not available as adjacent areas are already being fished by potters, in which case the gear already on the ground limits the level of displacement.

21.8.3.7 While there remains potential for gear conflicts and increased fishing pressure to arise based on Scenarios 2 and 3, appropriately mitigated exclusion impacts will limit the likelihood of being displaced to alternative grounds.

21.8.3.8 Taking all of these aspects into consideration, the magnitude of the displacement impact is assessed to be **Medium Adverse** for the local (<12 m) potting fleet.

All other fisheries:

21.8.3.9 Displacement from the Offshore Project is not expected to affect the other fisheries since key fishing grounds and therefore activity is located outside of the Array Area and OCAS. The magnitude of displacement is assessed to be **Low** for all other fisheries.

Sensitivity

21.8.3.10 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.8.3.11 The sensitivity is as described in paragraphs 21.8.1.30 to 21.8.1.37 and summarised as **High** for potting vessels <12 m targeting lobster, set nets and diving fisheries; **Medium** for other potting fleets (12 m and over targeting lobster and all vessels targeting nephrops), and handline and **Low** for all other commercial fishing fleets.

Significance of effect

21.8.3.12 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) include the FMMCP (M026) and procedures for gear fastening, loss reporting, and separation distances (M038), alongside participation in the CFWG (M027), to reduce the potential impact pathway of displaced fishing effort leading to gear conflict and increased competition on adjacent grounds through collaborative fisheries coordination and adherence to best-practice reporting mechanisms.

21.8.3.13 The significance of effect of displacement leading to gear conflict and increasing fishing ground pressure on adjacent grounds to commercial fisheries receptors during the construction phase is summarised in **Table 21-16**.

Table 21-16 Significance of effect of Displacement leading to gear conflict and increased fishing pressure on adjacent grounds to commercial fisheries during the construction phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting <12m for lobster, brown crab, ballan wrasse etc	Medium Adverse	High	M026 M027 M028 M032 M030 M038	**Moderate Adverse**	**Significant**	Local inshore potting vessels (5-7 boats from Carloway/*Càrlabhagh*) are most susceptible to displacement effects. Loss of access within the Array Area and OCAS may force relocation of pots into adjacent inshore areas already actively fished by other potters. Potential scenarios include reduced catch per unit effort due to competition, increased operational costs, and heightened risk of gear conflict where grounds are congested. Mobile gears such as trawls and dredges are unlikely to be displaced into potting areas, but competition among static gears is probable. Given the limited alternative grounds and high dependence on local fishing areas, displacement could lead to tension and reduced viability for small-scale operations.
Potting >12m for lobster, brown crab, ballan wrasse etc	Low Adverse	Medium		Minor Adverse	Not Significant	The larger offshore potting fleet operates beyond the 6 nm limit and is less dependent on inshore grounds adjacent to the Offshore Project area. If displacement occurs, vessels can relocate further offshore without significant competition or overlap with smaller inshore fleets.
Potting for nephrops	Low Adverse	Medium		Minor Adverse	Not Significant	Nephrops potting is focused on muddy habitats east of Lewis and outside of the affected area. No displacement or gear conflict is expected.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Medium		Minor Adverse	Not Significant	Demersal trawl and seine activity is concentrated offshore and is not expected to be displaced into nearshore static gear areas. Therefore, no increase in gear interaction or pressure on adjacent grounds is anticipated.
Demersal trawl fishery for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	These vessels operate over muddy grounds east of Lewis/*Eilean Leòdhais*, outside the Offshore Project area. No displacement into potting or static gear grounds is expected.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	Pelagic trawlers operate offshore, along the Hebridean Slope, with minimal interaction with inshore static gear fleets. Displacement effects and gear conflicts are not anticipated.
Handline targeting mackerel (and occasional blue fin tuna)	Low Adverse	Low		Minor Adverse	Not Significant	Handline activity is opportunistic and seasonal, typically conducted nearshore by potting vessels. If potting activity is displaced, competition for nearshore space may marginally increase, but direct gear conflict is unlikely due to the small spatial footprint of handlining. Magnitude: Low Adverse; Sensitivity: Medium; Significance: Minor Adverse (not significant).
Dredge for scallop	Low Adverse	Medium		Minor Adverse	Not Significant	Scallop dredging occurs primarily on the east coast of Lewis/*Eilean Leòdhais* and not in areas overlapping with static

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
						gear fleets on the west. No displacement or gear conflict expected.
Set nets for white fish and rays	Low Adverse	Low		Minor Adverse	Not Significant	Set-net vessels may experience minor displacement if potting gear is relocated into their grounds. While potential exists for spatial overlap, the limited number of participants and seasonal nature of the fishery mean widespread gear conflict is unlikely.
Commercial diving for shellfish	Low Adverse	High		Minor Adverse	Not Significant	Diving is restricted to very inshore grounds and is unlikely to overlap spatially with displaced potting effort. No measurable displacement or gear conflict anticipated.
All other gears and fisheries	Low Adverse	Medium		Minor Adverse	Not Significant	Minor and wide-ranging fisheries such as longline or occasional gillnetting are not expected to be displaced or affected by redistribution of effort from the Offshore Project Area.

This page has intentionally been left blank

Further Environmental Mitigation

21.8.3.14 Given the potential for displacement leading to gear conflict and increased fishing pressure on adjacent grounds to result in impacts that are predicted to be significant in EIA terms, the following further environmental mitigation relevant to Commercial Fisheries, shown in **Table 21-17** has been identified.

Table 21-17: Relevant Commercial Fisheries further mitigation measures

ID	Environmental Measure Proposed	Project Phase Measure Introduced	How the Environmental Measures will be Secured	Relevance to Fisheries Assessment
A001	The use of rock bags for array cable connecting WTGs protection within the Array Area will be limited to within 50 m of WTG and Offshore Substation Platform infrastructure.	Pre-construction, construction, O&M	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Minimises spatial extent of external cable protection, reducing snagging risk and limiting disturbance to fishing operations.
A002	The Offshore Project will endeavour to route the Offshore Cables network to maximise resumption of fishing were possible.	Pre-construction, construction	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Supports cooperation by designing cable routes to maintain or restore access to fishing grounds wherever feasible.
A003	Disruption Agreements will be implemented to coordinate and agree appropriate co-operation and establish evidence-based disruption payments to fishermen, where identified as significant within the EIA.	Construction and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Provides a fair and transparent mechanism to compensate fishers for demonstrable disruption, supporting socio-economic resilience and cooperation.

Significance of Residual Effect

21.8.3.15 Potting (<12 m vessels): The additional mitigation presented **Table 21-17** will maximise the opportunity for fishing to resume and thereby limit the level of displacement. Based on the successful application of this additional mitigation, the residual effect of this impact during construction is reduced to Minor Adverse significance, which is Not Significant in EIA terms.

21.8.3.16 All other commercial fisheries receptors: The significance of residual effect remains as presented in **Table 21-16** summarised as Minor Adverse to Negligible for all fleets, which is Not Significant in EIA terms.

21.8.4 DISPLACEMENT OR DISRUPTION OF COMMERCIALLY IMPORTANT FISH AND SHELLFISH RESOURCES

21.8.4.1 This section assesses the potential temporary subsequent impact for the owners of fishing vessels where commercially important stocks may be disturbed or displaced to a point where normal fishing practices would be affected. During construction, temporary noise and seabed disturbances during Offshore Project related activities may displace commercially important fish and shellfish populations from the area.

21.8.4.2 With respect to the magnitude of this impact on Commercial Fisheries, the overall significance of the effect on fish and shellfish species has been considered (i.e. both the magnitude and sensitivity of fish and shellfish species have been considered to assess the magnitude of impact on commercial fishing fleets).

21.8.4.3 The maximum design scenario relating to displacement or disruption of commercially important fish and shellfish resources during the construction phase are presented in **Table 21-10**.

Magnitude

21.8.4.4 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

Shellfish

21.8.4.5 Lobster and brown crab are key shellfish resources within the inshore fishery around Lewis/*Eilean Leòdhais*, forming the economic foundation of the local potting fleet operating primarily from Carloway/*Càrlabhagh* and adjacent west coast ports. The species occur across mixed and rocky substrates, with brown crab particularly associated with coarse sediment and rocky reef areas, and lobster favouring creviced or boulder-strewn habitats. These species, while of high commercial importance, have moderate sensitivity to physical seabed disturbance and moderate mobility, enabling temporary avoidance of construction impacts and rapid recolonisation following disturbance.

21.8.4.6 A highly relevant study by Roach *et al*. (2018) investigated the effect of the construction and operation of the Westermost Rough OWF on established lobster fishing grounds (noting that this site lies approximately 8 km off the Holderness coast, in the North Sea). The study concluded that temporary closures of selected areas may be beneficial to lobster fisheries and should be considered as a management option for lobster fisheries and observed that:

- The temporary closure during the construction period offered some respite from fishing pressure for adult lobsters and led to an increase in abundance and size of lobster in the wind farm area, when the fishing resumed during the operational phase;
- Reopening of the site to fishing exploitation saw a decrease in catch rates and size structure, but this did not reach levels below that of the surrounding area;
- Opening the site to exploitation allowed the fishery to recuperate some of the economic loss during the closure.

21.8.4.7 During the construction phase, activities such as foundation installation, cable trenching, boulder clearance, and the laying of rock protection will cause temporary seabed disturbance and localised habitat loss within the Array Area and OCAS. Seabed disturbance may temporarily displace individuals and reduce access to traditional fishing grounds for the inshore potting fleet. However, the total area affected represents a small proportion of the available habitat and fishing grounds, and both species are expected to recolonise disturbed areas shortly after completion of works.

21.8.4.8 Temporary increases in suspended sediment concentrations and localised smothering may occur during trenching and cable installation but are predicted to be short-lived and spatially limited. Laboratory studies and empirical observations demonstrate that brown crab and lobster exhibit low sensitivity to elevated suspended sediment concentrations and are capable of behavioural avoidance of high turbidity conditions. Sediment deposition of less than 5 cm is not anticipated to have measurable physiological effects, and heavier deposition (up to 30 cm) is expected to cause only temporary displacement. Brown crab in particular exhibits negligible sensitivity and high recoverability following sediment disturbance, consistent with its mobility and generalist habitat use.

21.8.4.9 The temporary exclusion of fishing activity from active construction zones and associated 500 m safety buffers will cause short-term disruption to local fishing access and activity, particularly for the small-scale potting fleet. Vessels will be required to temporarily relocate gear or adjust operational routes. Communication measures embedded through the FMMCP, and information dissemination via NtMs, Kingfisher Bulletins, and direct liaison through the CFLO, OFLO, and FIR, will minimise unplanned disruption and ensure safe coordination between fishers and project vessels.

21.8.4.10 Overall, effects on the commercial lobster and brown crab resource during construction are predicted to be low to medium magnitude, short-term, and not significant in EIA terms. While

temporary displacement of individuals and fishing activity may occur, there will be no lasting effect on species distribution, abundance, or stock viability within the wider regional fishery.

21.8.4.11 No measurable effect on other shellfish resources is anticipated during construction, as scallop and razor shell fisheries are not actively targeted within the Offshore Project area, and temporary seabed disturbance will not affect wider shellfish stocks or habitats of ecological or commercial importance.

Finfish

21.8.4.12 Several commercially important finfish species, including monkfish (anglerfish), haddock, turbot, ray species (including common skate and spotted ray), ballan wrasse, and Atlantic herring, occur within or near the Offshore Project area. These species support a mix of demersal trawl, set-net, and potting fisheries, contributing to both local and regional economic activity.

21.8.4.13 Seabed disturbance associated with foundation installation, cable trenching, and boulder clearance will locally affect benthic and demersal fish habitats. Demersal spawners such as turbot and rays may experience minor egg case loss or displacement, although these effects will be highly localised and reversible. Monkfish and haddock, with broad nursery distributions and mobile adult stages, are unlikely to sustain population-level impacts. For ray species, nursery habitat is limited and mainly outside the nearshore zone, and thus sensitivity to disturbance is low to medium. Ballan wrasse, which favours rocky substrates, may temporarily vacate disturbed areas but will recolonise as habitats stabilise. As a pelagic spawner, mackerel eggs and larvae are suspended in the upper water column and therefore less sensitive to seabed disturbance or sediment deposition than demersal species. Overall, habitat disturbance effects are considered low magnitude and not significant in EIA terms.

21.8.4.14 Temporary increases in suspended sediment concentrations (SSC) and deposition during cable trenching will be short-lived and spatially limited. Species such as monkfish, haddock, mackerel and herring are tolerant of naturally variable turbidity and show rapid recovery. Herring spawning habitat in the southwestern portion of the Array Area is limited, and embedded mitigation such as timing restrictions (M023) and micrositing (M001) will further minimise risk. Overall, SSC-related impacts are low magnitude.

21.8.4.15 Underwater noise from piling may cause temporary behavioural avoidance within a few kilometres of active construction (see Chapter 12, Volume 2a). For species such as monkfish, haddock, rays, mackerel and herring, startle and displacement effects will be short-term and reversible. No injury thresholds are predicted to be exceeded, and overall noise impacts are low magnitude.

21.8.4.16 In *summary*, during the construction phase, short-term displacement or behavioural responses may occur for monkfish, haddock, turbot, rays, ballan wrasse, and herring, but effects are spatially restricted, temporary, and reversible. Embedded mitigation will minimise disturbance, across a short-term period, resulting in low magnitude.

Sensitivity

21.8.4.17 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.8.4.18 Given the reliance on fishing grounds across the local study area, together with relatively limited operational range, the inshore (<12 m) potting fleet targeting brown crab, lobster and ballan wrasse, the handline fleet targeting mackerel and the set net fleet targeting whitefish and ray are deemed to be of high vulnerability and medium recoverability; the sensitivity for these fleets is considered to be high.

21.8.4.19 The offshore (>12 m) potting fleet also targets grounds overlapping the Offshore Project, however, have a wider operational range and greater opportunities for alternative fishing grounds. Overall, sensitivity is considered medium.

21.8.4.20 For all other fleets, due to the range of alternative areas targeted and the distribution of key commercial species throughout the Irish Sea, fleets are deemed to be of low vulnerability, high recoverability and medium-low value. The sensitivity of the receptor for all other fleets is therefore considered to be low.

Significance of Effect

21.8.4.21 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) includes adherence to the *OEMP* (EMP) (M019) and Cable Plan (M002), alongside the INNS Management Plan (M006), to reduce the potential impact pathway of construction-related habitat disturbance and consequent displacement or behavioural disruption of commercially important fish and shellfish species.

21.8.4.22 The *significance* of effect of displacement or disruption of commercially important fish or shellfish resources to Commercial Fisheries receptors during the construction phase is summarised in **Table 21-18**.

Table 21-18 Significance of effect of displacement or disruption of commercially important fish and shellfish resources to commercial during the construction phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting <12m for lobster, brown crab, ballan wrasse etc	Low Adverse	High	M002 M004 M006 M026 M019 M021	Minor Adverse	Not Significant	Temporary seabed disturbance and underwater noise during construction may cause short-term behavioural displacement of lobster, brown crab, and ballan wrasse from traditional potting areas. These species are moderately sensitive to disturbance but exhibit rapid recolonisation and high recoverability. Embedded mitigation, including timing restrictions, micrositing, and proactive communication through the FMMCP and Kingfisher Bulletins, will reduce the risk of disruption.
Potting >12m for lobster, brown crab, ballan wrasse etc	Low Adverse	Medium		Minor Adverse	Not Significant	The offshore potting fleet (>12 m) targeting lobster and brown crab operates across a wide range of grounds. Temporary seabed disturbance or avoidance behaviour by target species will have minimal influence on catch rates due to the fleet's mobility and ability to relocate.
Potting for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	Nephrops creeling is restricted to muddy habitats east of Lewis and outside the Offshore Project area. No measurable disturbance or displacement effects are predicted for this fishery.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Low		Minor Adverse	Not Significant	Short-term seabed disturbance and underwater noise may temporarily displace demersal species such as monkfish and haddock, but these species have wide distributions and high mobility. Habitat disturbance will be localised and reversible.
Demersal trawl fishery for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	Nephrops trawling occurs in muddy areas east of Lewis/*Eilean Leòdhais*, beyond the Offshore Project footprint. No direct displacement or resource disruption is anticipated.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	Pelagic trawl fisheries target species occurring in midwater or offshore waters. Temporary underwater noise may cause minor avoidance responses, but pelagic species are highly mobile and will quickly return.
Handline targeting mackerel (and occasional blue fin tuna)	Low Adverse	High		Minor Adverse	Not Significant	Mackerel targeted by handline fisheries may temporarily alter distribution in response to noise or vessel activity. Given their high mobility and rapid recovery, any disruption will be short-term and reversible.
Dredge for scallop	Low Adverse	Low		Minor Adverse	Not Significant	Scallop dredging occurs primarily on the east coast of Lewis/*Eilean Leòdhais* in sandy gravel habitats outside the Offshore Project area. No measurable

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
						effect on scallop abundance or fishery productivity is expected.
Set nets for white fish and rays	Low Adverse	High		Minor Adverse	Not Significant	Set-net fisheries may experience short-term reductions in target species presence if demersal species temporarily avoid disturbed areas. These effects are spatially limited and reversible.
Commercial diving for shellfish	Low Adverse	Low		Minor Adverse	Not Significant	Commercial diving for scallops and razor clams is limited to very inshore grounds. Temporary seabed disturbance will not overlap with active diving areas, and no measurable displacement is expected. Magnitude:
All other gears and fisheries	Low Adverse	Low		Minor Adverse	Not Significant	Minor fisheries such as longline and tangle nets operate intermittently and across broad areas. Temporary seabed disturbance and fish displacement are unlikely to have a detectable impact on fishing activity or stock availability.

This page has intentionally been left blank

Further Environmental Mitigation and Residual Effect

21.8.4.23 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is Not Significant in EIA terms.

21.8.5 INCREASED VESSEL TRAFFIC ASSOCIATED WITH THE OFFSHORE PROJECT WITHIN FISHING GROUNDS LEADING TO INTERFERENCE WITH FISHING ACTIVITY

21.8.5.1 This section assesses the likely significant effects arising from vessel traffic related to the Offshore Project and changes to shipping patterns as a result of any potential navigational channels leading to interference with fishing activity (i.e. reduced access) during the construction phase.

21.8.5.2 The maximum design scenario relating to increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity during the construction phase are presented in **Table 21-10**.

Magnitude

21.8.5.3 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.8.5.4 Vessel movements (i.e. construction vessels transiting to and from areas undergoing construction works) related to the construction of the Offshore Project and all associated infrastructure will add to the existing level of shipping activity in the area (A full assessment of additional vessel movements are provided in **Appendix 16.1, Volume 2c**).

21.8.5.5 The construction phase may last for up to approximately 5 years, with up to 35 construction vessels located on site simultaneously. Up to 871 return trips by construction vessels (and site preparation vessels) may be made throughout the construction phase and will include vessels which are Restricted in their Ability to Manoeuvre (RAM). Offshore Project vessels will be managed by marine coordination, including the use of traffic management procedures such as the designation of entry and exit points to and from the buoyed construction area (M014). Offshore Project vessels will also carry AIS and be compliant with relevant Flag State regulations, including the COLREGs (M015), and comply with the procedures set out in the **Outline Navigational Safety and Vessel Management Plan, Volume 3** (M022).

21.8.5.6 Safety zones will be applied for including up to 500 m around structures where vessels are undertaking construction work and 50 m around partially completed or completed surface piercing structures prior to commissioning of the wind farm. Such safety zones will protect Offshore Project vessels involved in construction which may be RAM. If on-site as deemed necessary via risk assessment, guard vessels will also assist with monitoring safety zones and alerting third party traffic to their presence.

21.8.5.7 Details of construction activities, including the presence of safety zones and any use of advisory exclusion zones, as defined by risk assessment, will be suitably promulgated to maximise awareness of ongoing construction activities.

21.8.5.8 Additionally, the use of IALA G1162 (IALA, 2021) compliant lighting and marking including lights, marks, sounds, signals and other aids to navigation as required by the NLB and the Maritime and Coastguard Agency (MCA) will further maximise awareness, both in day and night conditions including in restricted visibility. This includes the buoyed construction area which will be agreed with the NLB and within which Offshore Project vessels undertaking construction activities will most likely be located during construction activities.

21.8.5.9 It is noted that continuous liaison with the fishing industry will be undertaken including location and duration of construction activities; further details are provided in the FMMCP.

21.8.5.10 All fishing fleets are considered to be able to avoid vessel movements related to construction of the Offshore Project based on prior provision of construction details (timings and locations) allowing fishing vessels to plan their activities; use of traffic management procedures including entry and exit points for Offshore Project related vessels; and adherence to the NSVMP.

21.8.5.11 The impact is predicted to be of medium-term duration, intermittent and high reversibility. The magnitude is therefore, considered to be **Low** adverse for all fleets.

Sensitivity

21.8.5.12 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.8.5.13 Potting gear can be vulnerable to increased construction vessel movements within supply routes to and from entry and exit points due to risk of entanglement of construction vessel propellers with marker buoys of fishing gear. It is noted that established shipping routes do currently cross the Offshore Project, and that the construction vessels are likely to follow these routes where practicable. Potting vessels have limited manoeuvrability and their gears are vulnerable to entanglement from transiting Project vessels and the sensitivity is therefore, considered to be **medium**.

21.8.5.14 All other fishery fleets are expected to be in a position to avoid the Offshore Project construction areas. The dredge, demersal otter trawl, handlining and pelagic trawl fleets are deemed to be of low vulnerability and the sensitivity is therefore, considered to be **low**.

Significance of Effect

21.8.5.15 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) include compliance with the NSVMP (M022) and establishment of a Marine Coordination Centre (M029), alongside adherence to the FMMCP (M026), to reduce the potential impact pathway of interference and navigational conflict between Offshore Project vessels and active fishing operations through coordinated communication, traffic monitoring, and issuance of NtMs via the CFLO, OFLO, and FIR.

21.8.5.16 The significance of effect of increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity to Commercial Fisheries receptors during the construction phase is summarised in **Table 21-19**.

Table 21-19 Significance of effect of increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity to Commercial Fisheries during the construction phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting for lobster, brown crab, ballan wrasse etc (all vessel lengths)	Low Adverse	Medium	M010 M029 M022 M028 M026 M027 M037	Minor Adverse	Not Significant	During construction, vessel activity will temporarily increase, with up to 35 installation and support vessels operating on site simultaneously and transiting to and from port. Temporary 500 m safety zones, managed through the Marine Coordination Centre and in accordance with the NSVMP, will restrict access around active works. Fishing vessels will be notified of vessel movements, safety zones, and navigation changes through the FMMCP, CFLO/OFLO/FIR liaison, and NtMs. Potting and set-net fisheries may experience occasional interference or minor risk of gear interaction near transit routes, but these effects will be short-term and well
Potting for nephrops	Low Adverse	Medium		Minor Adverse	Not Significant	
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	
Handline targeting mackerel (and occasional blue fin tuna)	Low Adverse	Low		Minor Adverse	Not Significant	

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Dredge for scallop	Low Adverse	Low		Minor Adverse	Not Significant	managed through coordination, AIS tracking, and established traffic routes.
Set nets for white fish and rays	Low Adverse	Low		Minor Adverse	Not Significant	
Commercial diving for shellfish	Low Adverse	Low		Minor Adverse	Not Significant	
All other gears and fisheries	Low Adverse	Low		Minor Adverse	Not Significant	

Further Environmental Mitigation and Residual Effect

21.8.5.17 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.8.6 ADDITIONAL STEAMING TO ALTERNATIVE FISHING GROUNDS

21.8.6.1 A detailed Navigational Risk Assessment is provided at **Chapter 16, Volume 2a** and **Appendix 16.1, Volume 2c**, and includes full consideration of commercial fishing vessels while transiting (e.g. from a collision and allision perspective). This assessment focuses on the potential impact of longer steaming distances to alternative fishing grounds.

21.8.6.2 The maximum design scenario relating to additional steaming to alternative fishing grounds during the construction phase are presented in **Table 21-10**.

Magnitude

21.8.6.3 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.8.6.4 Details of the Offshore Project's construction activities will be promulgated in advance of, and during construction via the usual means (e.g., Notice to Mariners, Kingfisher bulletin) to ensure mariners are aware of the ongoing works. Construction works will only necessitate minor deviations for fishing vessels transiting through the site during the construction phase. Localised impacts are anticipated but will be limited to the immediate area of construction activity and associated construction vessels. The magnitude is therefore, considered to be **Low Adverse** for all fishing fleets.

Sensitivity

21.8.6.5 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.8.6.6 Potting for lobster, crab and ballan wrasse (under and over 12 m fleets) and handlining fleets: These vessels predominately operate within the inshore waters and are therefore more sensitive to increased steaming if that requires travel to areas outside their normal operational daily range. The potting and handlining fleets are considered to have low levels of alternative fishing grounds on the west of Lewis/*Eilean Leòdhais*, although are recognised to fish the east side of Lewis/*Eilean Leòdhais* seasonally. The sensitivity of these receptors is therefore, considered to be **Medium**.

21.8.6.7 The pelagic mobile fleet operates across a wide range of grounds and is not specifically focused across the Offshore Project Boundary. All pelagic gear fleets are considered to have an extensive operational range, be highly adaptive and resilient to change. The sensitivity of these receptors is therefore, considered to be **Low**.

21.8.6.8 All other fisheries: Are not specifically focused across the Offshore Project area, and target either specific grounds located outside the Offshore Project Boundary (e.g., scallop, razor clams, nephrops) or have a wide operational range and are adaptive to target a range of fishing grounds (e.g., demersal trawl for whitefish species). The sensitivity of these receptors is therefore, considered to be **low**.

Significance of Effect

21.8.6.9 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) includes participation in the CFWG (M027) and adherence to the OEMP (M019), alongside compliance with Notices to Mariners and Kingfisher notifications (M012), to reduce the potential impact pathway of increased steaming distances and operational costs for vessels relocating to alternative grounds through advance notice, clear scheduling, and dissemination of navigational updates.

21.8.6.10 The significance of effect of additional steaming to alternative fishing grounds to Commercial Fisheries receptors during the construction phase is summarised in **Table 21-20**.

Table 21-20 Significance of effect of additional steaming to alternative fishing grounds to commercial fisheries during the construction phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting for lobster, brown crab, ballan wrasse etc	Low Adverse	Medium	M026 M027 M032 M038 M029 M037	Minor Adverse	Not Significant	During the construction phase, fishing vessels may experience minor deviations in transit routes to avoid active construction areas or associated safety zones. These temporary diversions could marginally increase steaming distances and fuel use, but effects will be short-term and localised. Advance notification of construction activities through Notices to Mariners (NtMs), Kingfisher Bulletins, and liaison via the CFLO, OFLO, and FIR will allow fishing operators to plan routes efficiently and minimise disruption.
Potting for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	
Handline targeting mackerel (and occasional blue fin tuna)	Low Adverse	Medium		Minor Adverse	Not Significant	
Dredge for scallop	Low Adverse	Low		Minor Adverse	Not Significant	
Set nets for white fish and rays	Low Adverse	Low		Minor Adverse	Not Significant	

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Commercial diving for shellfish	Low Adverse	Low		Minor Adverse	Not Significant	
All other gears and fisheries	Low Adverse	Low		Minor Adverse	Not Significant	

Further Environmental Mitigation and Residual Effect

21.8.6.11 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.8.7 PHYSICAL PRESENCE OF INFRASTRUCTURE LEADING TO GEAR SNAGGING

21.8.7.1 The under construction and physical presence of Offshore Project infrastructure on the seabed represents potential snagging points for fishing gear and could lead to damage to, or loss of, fishing gear. The safety aspects including potential loss of life as a result of snagging risk are assessed within **Chapter 16, Volume 2a**.

21.8.7.2 Throughout the construction phase, 500 m Safety Zones will be enacted around construction activities and 50 m exclusion zones will be in place around incomplete structures. For structures that are complete and not yet operational, a 50 m advisory safety distance is assumed.

21.8.7.3 The maximum design scenario relating to physical presence of infrastructure leading to gear snagging during the construction phase are presented in **Table 21-10**.

Magnitude

21.8.7.4 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.8.7.5 In the instance that snagging does occur, the Applicant will work to the protocols laid out within the guidance produced by the FLOWW group and ''Recommendations for Fisheries Liaison: Best Practice'' guidance for offshore renewable developers, in particular section 11: Dealing with claims for loss or damage of gear.

21.8.7.6 Snagging poses a risk to fishing equipment and in extreme cases may potentially lead to capsize of vessel and crew fatalities, as well as damage to subsea infrastructure. 3 phases of interaction are possible:

- Initial impact of gear and subsea infrastructure;
- Pullover of gear across subsea infrastructure;
- Snagging or hooking of gear on the subsea infrastructure.

21.8.7.7 The snagging or hooking of fishing gear with infrastructure/cables on the seabed is the most hazardous to the vessel and crew due to the possibility of capsizing.

21.8.7.8 It is considered likely that fishermen will operate appropriately (i.e. adhering to Safety Zones and advisory exclusion zones, and avoiding under construction infrastructure, surface laid cables and cable stabilisation/cable protection at the defined locations) given adequate notification of the

locations of any snagging hazards; and are highly likely to avoid the under-construction infrastructure within the Array Area.

21.8.7.9 The impact is predicted to be of medium-term duration, continuous (over construction phase) and with low reversibility.

21.8.7.10 Potting for lobster, crab and ballan wrasse (under and over 12 m fleets) and set net fleets: Due to the presence of rock bags used for stabilisation across the OCAS along with surface-laid Array Cables to Landfall and Array Cables, and the use of potting gear within the Offshore Project Boundary, there is a moderate risk of gear entanglement with Offshore Project infrastructure. As a result, the magnitude of impact is assessed as **medium** adverse.

21.8.7.11 All other fisheries: Based on the commitment to follow standard protocols should snagging occur, as detailed in the FMMCP, the magnitude is considered to be **low** adverse for all other fleets.

Sensitivity

21.8.7.12 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.8.7.13 Due to the nature and operation of mobile demersal gear (i.e. it is actively towed and directly penetrates the seabed with near continuous contact) there is increased vulnerability to this impact and the sensitivity is therefore considered to be **medium** for all mobile demersal fisheries.

21.8.7.14 Although potting gear is less vulnerable to snagging, since it is stationary, placed on the seabed, and not towed, it can still be displaced by tidal currents and sea hydrodynamics. This movement poses a risk of entanglement with seabed infrastructure, and snagging remains a concern. Consequently, the sensitivity of potters is considered **medium**.

21.8.7.15 Set net fisheries (e.g. gillnets, tangle nets), which deploy static gear directly on the seabed for extended soak periods, also carry a **medium** sensitivity. While not actively towed, these gears remain in situ and are susceptible to entanglement with subsea cables, anchors or mooring systems, particularly where gear may drift, foul or become obstructed during hauling.

21.8.7.16 Pelagic trawl and handline gear do not contact the seabed, resulting in low vulnerability to snagging on seabed infrastructure. Consequently, the sensitivity of pelagic trawl and handline fleets is considered **low**.

Significance of effect

21.8.7.17 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) includes include implementation of subsea cable burial and protection in line with MGN 654 (M030) and recording and communication of relocated boulders or seabed obstructions (M030), alongside adherence to the FMMCP (M026), to reduce the potential impact pathway of gear snagging or loss from interaction with subsea infrastructure through appropriate burial, marking, and timely information sharing via the CFLO, OFLO, and FIR.

21.8.7.1 The significance of effect of physical presence of infrastructure leading to gear snagging to Commercial Fisheries receptors during the construction phase is summarised in **Table 21-21**.

Table 21-21 Significance of effect of physical presence of infrastructure leading to gear snagging to commercial fisheries during the construction phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Potting for lobster, brown crab, ballan wrasse etc	Medium Adverse	Medium	M030 M032 M038 M033 M014 M011 M012 M013	**Moderate Adverse**	**Significant**	Potting vessels, both inshore (<12 m) and offshore (≥12 m), are moderately exposed to snagging risks due to interaction with surface-laid cables, rock bags, and cable protection across the Array Area and OCAS. While static pots are less prone to snagging than mobile gear, they can still become entangled if displaced by tidal currents or if set near stabilised infrastructure. Adequate notification and charting of infrastructure locations will mitigate risk.
Potting for nephrops	Low Adverse	Medium		Minor Adverse	Not Significant	These fisheries are conducted on muddy grounds away from the Offshore Project area. No overlap is expected, and thus snagging risk is minimal.
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Medium		Minor Adverse	Not Significant	Demersal gears, being actively towed in continuous seabed contact, have an inherent snagging risk with surface infrastructure. However, adherence to safety zones and avoidance of construction areas will likely prevent direct interaction. Residual risk remains for gear loss or damage near cable protection features.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Demersal trawl fishery for nephrops	Low Adverse	Medium		Minor Adverse	Not Significant	These fisheries are conducted on muddy grounds away from the Offshore Project area. No overlap is expected, and thus snagging risk is minimal.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	Pelagic trawlers operate in midwater and have negligible contact with the seabed, making snagging risk minimal.
Handline targeting mackerel (and occasional blue fin tuna)	Low Adverse	Low		Minor Adverse	Not Significant	Handline fishing is conducted at the surface or midwater, entirely avoiding seabed infrastructure. There is no credible risk of snagging.
Dredge for scallop	Low Adverse	Medium		Minor Adverse	Not Significant	Dredges operate in direct contact with the seabed and are highly susceptible to snagging. However, dredging does not occur within the Array Area or OCAS, and the risk is therefore largely theoretical.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance of effect	Significance	Commentary
Set nets for white fish and rays	Medium Adverse	Medium		**Moderate Adverse**	**Significant**	Set nets are deployed directly on the seabed for extended soak periods and can snag or foul on cables or rock protection. This gear type remains in situ and is vulnerable to obstruction during hauling operations. With advisory distances, appropriate liaison, and seabed marking, risks can be managed but not fully eliminated.
Commercial diving for shellfish	Low Adverse	Medium		Minor Adverse	Not Significant	Diving activities are limited to shallow, inshore areas and are unlikely to occur within or near seabed infrastructure. Potential for snagging of hoses or lines is negligible with proper awareness and communication.
All other gears and fisheries	Low Adverse	Medium		Minor Adverse	Not Significant	Other fishing methods, such as longlining and minor static gear, may operate sporadically within the wider area but do not routinely interact with subsea infrastructure. Risks are minimal given proper adherence to communication protocols (e.g. FLOWW, FMMCP).

This page has intentionally been left blank

Further Environmental Mitigation

21.8.7.2 The further environmental mitigation described in **Table 21-22** maximise the resumption of fishing within the Offshore Project and therefore minimise the potential for snagging to occur.

Table 21-22 Relevant Commercial Fisheries further mitigation measures

ID	Environmental Measure Proposed	Project Phase Measure Introduced	How the Environmental Measures will be Secured	Relevance to Fisheries Assessment
A001	The use of rock bags for array cable connecting WTGs protection within the Array Area will be limited to within 50 m of WTG and Offshore Substation Platform infrastructure.	Pre-construction, construction, operation (including maintenance)	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Minimises spatial extent of external cable protection, reducing snagging risk and limiting disturbance to fishing operations.
A002	The Offshore Project will endeavour to route the Offshore Cables network to maximise resumption of fishing were possible.	Pre-construction, construction	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Supports cooperation by designing cable routes to maintain or restore access to fishing grounds wherever feasible.
A003	Disruption Agreements will be implemented to coordinate and agree appropriate co-operation and establish evidence-based disruption payments to fishermen, where identified as significant within the EIA.	Construction and decommissioning	Secured in the Section 36 Consent and/or Marine Licence via the condition for an FMMCP to be submitted to MD-LOT for approval.	Provides a fair and transparent mechanism to compensate fishers for demonstrable disruption, supporting socio-economic resilience and cooperation.

Significance of Residual Effect

21.8.7.3 Potting for lobster, brown crab, ballan wrasse etc (all vessel lengths) and set nets for white fish and rays: The additional mitigation presented **Table 21-22** will maximise the opportunity for fishing to resume without risk of gear snagging. Based on the successful application of this additional

mitigation, the residual effect of this impact during construction is reduced to Minor Adverse significance, which is **Not Significant** in EIA terms.

21.8.7.4 All other Commercial Fisheries receptors: The significance of residual effect remains as presented in **Table 21-21** summarised as Minor Adverse for all fleets, which is **Not Significant** in EIA terms.

21.9 ASSESSMENT OF EFFECTS: OPERATION AND MAINTENANCE

21.9.1 REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS WITHIN THE ARRAY AREA

21.9.1.1 During the O&M phase the assessment assumes that commercial fisheries will resume actively fishing within the Array Area, with the exception of where physical infrastructure is present and an assumed 50 m safe operating distance from that infrastructure. The area inaccessible to fishing occupies 2.11 km^2 within the Array Area, including up to 60 WTGs, 1 OSP, and 180 km length of Array Cables, and an assumed 50 m advisory exclusion zones. In addition, there may be a temporary roaming 500 m safety zone related to maintenance activities. Minimum turbine spacing is 900 m centre-to-centre, including between turbines and all other infrastructure. The WTGs have an anticipated operational lifetime of 35 years.

21.9.1.2 The Array Cables cabling is up to 100% surface laid cable with intermittent stabilisation using rock bags. Cable stabilisation using rock bags is anticipated along 20% of the route (approximately 70 km), with placements every 5 m. Where additional protection is required, rock berms will be installed with a maximum height of 1.1 m, a base width of 5 m, a 1:3 slope, and a crest width of 3 m.

21.9.1.3 Based on the surface laid Array Cable connecting WTGs installation and use of rock bags, it is assumed that fishing will not resume across areas with infrastructure above the seabed i.e., fishing will not resume within the vicinity of Array Cables, WTG, and OSP infrastructure. Furthermore, no surface piercing infrastructure will be located outside the Turbine Area, although Array Cables may be located in this part of the Array Area.

21.9.1.4 Beyond these areas, the assessment assumes that while fishing will be possible within the Array Area where turbine spacing, turbine layout, and Array Cable connecting WTG cabling routes allow productive grounds to be targeted.

21.9.1.5 In addition, the individual decisions made by the skippers of fishing vessels with their own perception of risk will determine the likelihood of whether their fishing will resume within the Array Area. Inclement weather will be a significant contributor to this risk perception. The type and dimension of fishing gear also influences the potential opportunities within the Array Area. For example, pelagic trawl, multi-rig otter trawl and demersal seine/fly shooting gear require a greater

distance for safe operation and these gears are unlikely to target grounds in the vicinity of infrastructure. This is considered further within the magnitude assessment.

21.9.1.6 The maximum design scenario relating to reduction in access to, or exclusion from established fishing grounds within the Array Area during the O&M phase are presented in **Table 21-10**.

Magnitude

21.9.1.7 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.9.1.8 This impact will lead to a reduction in access to or exclusion from fishing grounds and the fish and shellfish resources within the grounds overlapping the Array Area for a range of fishing opportunities during the O&M phase, which will directly affect fleets over a long-term duration. The impact is predicted to be permanent with localised exclusion surrounding physical infrastructure, including subsea and surface piercing infrastructure.

21.9.1.9 The impact is of relevance to a range of fishing fleets and is described below on a fishery-by-fishery basis.

21.9.1.10 *Potting for lobster, crab and ballan wrasse (under and over 12 m fleets):*

21.9.1.11 The activity of the potting fleet is as described for the construction phase in Section 21.8.1. The presence of surface-laid Array Cables connecting WTGs, along with associated stabilisation using rock bags will result in long-term obstruction to potting activities during the operation phase across a widespread network of cables within the Array Area.

21.9.1.12 During the O&M phase, the presence of surface piercing infrastructure plus 50 m radius assumed safe operating distance equates to an area of 0.7 km^2. In the instance that surface laid cable, and associated stabilisation is avoided by fishers, with a 50 m assumed safe operating distance from cables, this equates to a total area of 1.41 km^2. Therefore, during the operation phase up to 1.3% of the Array Area will be assumed inaccessible to fishing and this inaccessible area will be dispersed and interspersed throughout the entire Array Area i.e., at WTG locations and along the network of Array Cables routes. The fishing grounds accessible will be dependent on the routing of Array Cables and the area on ground in between Offshore Project related infrastructure (including WTGs and OSP). Overall, the impact during operation will allow partial resumption of fishing, is predicted to be of long-term duration, to directly affect the fishery which has a medium value within the local Study Area, and medium effort within the Array Area. To minimise potential for snagging and support resumption of fishing, the Offshore Project has committed (A001) to not using rock bags on Array Cables within the Array Area, (with exception that the use of rock bags for Array Cable connecting to infrastructure within the Array Area will be limited to within 50 m of WTG and OSP infrastructure). Based on the majority of the Array Area being accessible (>90%) and commitment

to not use rock bags to maximise opportunity for resumption of fishing, the magnitude is considered to be **low** adverse for the under and over 12 m fleets.

21.9.1.13 This assessment is based on the assumption that commercial fishing activity will resume within the Array Area and in the vicinity of Offshore Cable (Export Cable and Array Cable) infrastructure during the O&M phase. Monitoring is proposed to verify whether fishing effort returns to levels comparable to pre-construction baselines. If monitoring indicates that fishing has not resumed, or that activity remains significantly reduced, this will be identified through the agreed reporting mechanisms, and the applicant is committed to updating the FMMCP to ensure mitigation remains proportionate to the actual impact experienced. Should the assumption of resumption prove incorrect, emphasis will be placed on locally beneficial and sector-relevant mitigation measures, such as exploring the potential for alternative fishing opportunities (e.g. scallop potting) and resource enhancement initiatives, including lobster seeding or habitat improvement projects.

Potting for nephrops:

21.9.1.14 Nephrops are targeted by creel fisheries across muddy habitats located on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch and South Minch areas. Nephrops are not targeted across the Offshore Project Boundary and therefore, the magnitude is considered to be **negligible**.

Demersal trawl and seine fishery for monkfish, haddock, squid and mixed demersal finfish:

21.9.1.15 The activity of this fleet is as described for the construction phase in Section 21.8.1. The location of this demersal fishery is north, northwest and west of the Array Area. Demersal trawl and seine activity is not routinely recorded within the Array Area, as evidenced by VMS data for the UK and EU fleets and landing statistics for the local Study Area and therefore, the magnitude is considered to be **low**.

Demersal trawl fishery for nephrops:

21.9.1.16 Nephrops are targeted by demersal trawl fisheries, and to a lesser extent beam trawl fisheries, across muddy habitats located on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch and South Minch areas. Nephrops are not targeted across the Array Area and therefore, the magnitude is considered to be **negligible**.

Pelagic trawl targeting mackerel, herring and horse mackerel:

21.9.1.17 The activity of this fleet is as described for the construction phase in Section 21.8.1. Pelagic trawl activity is not routinely recorded within the Array Area, as evidenced by VMS data and landing statistics for the local Study Area and therefore, the magnitude is considered to be **low**.

Handline targeting mackerel (and occasional blue fin tuna):

21.9.1.18 The activity of this fleet is as described for the construction phase in Section 21.8.1. Available spatial data indicates that any handline activity is located very close inshore and does not overlap with the Array Area and therefore, the magnitude is considered to be **low**.

Dredge for scallop:

21.9.1.19 The activity of this fleet is as described for the construction phase in Section 21.8.1. Activity across the Array Area would be exploratory and in frequent and therefore, the magnitude of impact is considered to be **low** for both dredge and diving fisheries targeting scallop.

Commercial diving for shellfish:

21.9.1.20 The activity of this fleet is as described for the construction phase in Section 21.8.1. The habitat type targeted by the razor clam fishery is absent from the Array Area, which is instead characterized by hard, rocky substrates. Based on the absence of suitable habitat, it is assumed that the fishery is not targeted across the Array Area and therefore the magnitude is considered to be **low**.

All other fisheries:

21.9.1.21 Landing statistics indicate occasional activity within the local Study Area for longline targeting hake and ling. Available spatial evidence indicates that these fisheries do not occur across the Array Area based on data for under 12 m Scottish vessels and therefore the magnitude is considered to be **low**.

Sensitivity

21.9.1.22 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.9.1.23 The sensitivity is as described for the construction phase in Section 21.8.1, paragraphs 21.8.1.30 to 21.8.1.37 and summarised as **high** for potting gears (<12 m vessels), vessels deploying set nets and commercial diving for shellfish; **medium** for other potting gears and handline and **low** for all other commercial fishing fleets.

Significance of effect

21.9.1.24 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) include the FMMCP (M026) and participation in the CFWG (M027), alongside adherence to the Development Specification and Layout Plan (M032), to reduce the potential impact pathway of restricted access and spatial exclusion of fishing vessels within the Array Area through coordinated engagement and advance dissemination of final turbine and cable layout information via the CFLO, OFLO, and FIR.

21.9.1.25 The significance of effect of reduction in access to, or exclusion from established fishing grounds within the Array Area to Commercial Fisheries receptors during the O&M phase is summarised in **Table 21-23**.

Table 21-23 Significance of effect of reduction in access to, or exclusion from established fishing grounds within the Array Area to commercial fisheries during the Operation and Maintenance phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting <12 m for lobster, brown crab, ballan wrasse etc	Low	High	M026 M027 M028 M013 M029 M032 M036	Minor Adverse	Not Significant	During the O&M phase, local inshore potting vessels will be able to resume fishing across most of the Array Area, except near fixed infrastructure and cable routes where snagging hazards remain. Up to 1.3% of the Array Area will remain inaccessible due to advisory safe distances around turbines and surface-laid cables. The Offshore Project's commitment to minimise use of rock bag protection (limited to within 50 m of structures) substantially reduces the permanent footprint of obstruction. Given high dependency on local grounds but extensive opportunity for continued access (>90%), the impact is considered long-term but low in magnitude.
Potting >12 m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse	Not Significant	Larger offshore potting vessels have greater mobility and operational flexibility. While snagging hazards remain around turbines and surface-laid cables, these fleets can operate between turbines or relocate to alternative grounds.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting for nephrops	Negligible	Medium		Negligible	Not Significant	Nephrops potting targets muddy habitats on the east coast of Lewis/*Eilean Leòdhais*, well outside the Array Area. No spatial overlap is expected, and the effect is negligible.
Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse	Not Significant	Demersal trawl and seine fisheries mainly operate north and west of the Array Area and are not routinely active within its boundaries. Given the spacing between turbines (900 m) and general avoidance of snagging hazards, any interaction will be limited.
Demersal trawl fishery for nephrops	Negligible	Low		Negligible	Not Significant	This fleet operates on muddy sediments east of Lewis/*Eilean Leòdhais* and does not overlap with the Array Area.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse	Not Significant	Pelagic trawlers operate midwater, following migratory routes along the Hebridean Slope. They are not affected by seabed infrastructure and can continue operations without restriction.
Handline targeting mackerel (and	Low	Medium		Minor Adverse	Not Significant	Handline fishing occurs close inshore and does not overlap with the Array Area. No restriction is anticipated during the O&M phase.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
occasional blue fin tuna)						
Dredge for scallop	Low	Low		Minor Adverse	Not Significant	Scallop dredging remains confined to sandy gravel habitats along the east coast of Lewis/*Eilean Leòdhais*. Activity within the Array Area would be exploratory and infrequent, with minimal risk of interaction.
Set nets for white fish and rays	Low	High		Minor Adverse	Not Significant	Seasonal set-net fisheries have limited overlap with the Array Area. While static gear could encounter snagging hazards, turbine spacing and safe distance adherence will minimise conflict.
Commercial diving for shellfish	Low	High		Minor Adverse	Not Significant	Diving for scallops and razor clams occurs in shallow inshore habitats, not within the Array Area. No overlap or operational impact is expected.
All other gears and fisheries	Low	Medium		Minor Adverse	Not Significant	Occasional longlining and other minor fisheries may operate nearby but do not regularly target the Array Area. Given the limited overlap and communication measures through the FMMCP and CFWG, impacts are minimal.

This page has intentionally been left blank

Further Environmental Mitigation and Residual Effect

21.9.1.26 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.9.2 REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS WITHIN THE OCAS

21.9.2.1 The maximum design scenario relating to reduction in access to, or exclusion from established fishing grounds within the OCAS during the O&M phase are presented in **Table 21-10**.

Magnitude

21.9.2.2 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.9.2.3 This impact will lead to a reduction in access to or exclusion from fishing ground overlapping the Array Cables to Landfall within the OCAS for a range of fishing opportunities during the period of construction, which will directly affect fleets over a medium-term duration. The impact is predicted to be long-term with loss of access due to surface laid Array Cables to Landfall and rock bag stabilisation; in addition, there will be intermittent and localised exclusion surrounding maintenance activities.

21.9.2.4 The impact is of relevance to a range of fishing fleets and is described below on a fishery-by-fishery basis.

Potting for lobster, crab and ballan wrasse (under and over 12 m fleets):

21.9.2.5 The activity of this fleet is as described for the construction phase in Section 21.8. The maximum design scenario for the Array Cables to Landfall includes up to 12 Array Cables to Landfall running from the Array Area through the OCAS to Landfall. For the purposes of the Commercial Fisheries assessment, these 12 Array Cables to Landfall are assumed to be spread or fanned across the entirety of the OCAS , thereby causing the greatest reduction in access across the widest area. The construction of 12 surface-laid Array Cables to Landfall, along with associated stabilisation using rock bags, will result in long-term obstruction to potting activities across a widespread seabed footprint. Potting gear, such as creels used to target brown crab, lobster, and ballan wrasse, cannot be safely deployed or retrieved over cable routes where stabilisation materials are present, effectively excluding the fleet from significant sections of their traditional grounds.

21.9.2.6 During the O&M phase, in the instance that surface laid cable and associated stabilisation is avoided by fishers, with a 50 m assumed safe operating distance from cables, this equates to a total area of 1.57 km^2 and approximately 1.7% of the OCAS spread out, or fanned, throughout the OCAS

and therefore further areas may be inaccessible dependant on the proximity available between Array Cables to Landfall.

21.9.2.7 Overall, the impact during O&M is predicted to be of long-term duration, to directly affect the fishery which has a medium value within the local Study Area, and medium effort within the OCAS and therefore, the magnitude is considered to be **low** adverse.

Potting for nephrops:

21.9.2.8 Nephrops are targeted by creel fisheries across muddy habitats located on the east coast of Lewis/*Eilean Leòdhais*, in the North Minch and South Minch areas. Nephrops are not targeted across the OCAS and therefore, the magnitude is considered to be **negligible**.

Demersal trawl and seine fishery for monkfish, haddock, squid and mixed demersal finfish:

21.9.2.9 The activity of this fleet is as described for the construction phase in Section 21.8. Demersal trawl and seine activity is not routinely recorded within the OCAS, as evidenced by VMS data for the UK and EU fleets and landing statistics for the local Study Area and therefore, the magnitude is considered to be **low**.

Demersal trawl fishery for nephrops:

21.9.2.10 The activity of this fleet is as described for the construction phase in Section 21.8. Nephrops are not targeted across the OCAS and therefore, the magnitude is considered to be **negligible**.

Pelagic trawl targeting mackerel, herring and horse mackerel:

21.9.2.11 The activity of this fleet is as described for the construction phase in Section 21.8. Pelagic trawl activity is not routinely recorded within the OCAS, as evidenced by VMS data and landing statistics for the local Study Area and therefore, the magnitude is considered to be **low**.

Handline targeting mackerel (and occasional blue fin tuna):

21.9.2.12 The activity of this fleet is as described for the construction phase in Section 21.8. These vessels are known to operate seasonally within the OCAS, which overlaps with key areas of mackerel activity. During the O&M phase it is assumed that the handline fleet can resume operation across the entirety of the OCAS. The handline gear does not come into contact with the seabed and is designed to target a mid-water shoaling species. This reduces the risk of any interaction with the surface-laid cable and supports full resumption of fishing throughout operation, with the exception of temporary and intermittent disruption caused by maintenance activities and associated advisory exclusion zones. As a high level of fishing resumption is anticipated for the handline fishery across the OCAS, the magnitude of impact is assessed as **low**.

Dredge for scallop:

21.9.2.13 The activity of this fleet is as described for the construction phase in Section 21.8. Activity across the OCAS would be exploratory and in frequent and therefore, the magnitude of impact is considered to be **low** for both dredge and diving fisheries targeting scallop.

Commercial diving for shellfish:

21.9.2.14 The activity of this fleet is as described for the construction phase in Section 21.8. Based on the absence of suitable habitat, it is assumed that the fishery is not targeted across the OCAS and therefore the magnitude is considered to be **low**.

All other fisheries:

21.9.2.15 Landing statistics indicate occasional activity within the local Study Area for longline targeting hake and ling. These fisheries are understood to not occur across the OCAS and the magnitude is therefore **low**.

Sensitivity

21.9.2.16 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.9.2.17 The sensitivity is as described for the construction phase in Section 21.8.1, paragraphs 21.8.1.30 to 21.8.1.37 and summarised as **high** for potting gears (<12 m vessels), vessels deploying set nets and commercial diving for shellfish; **medium** for other potting gears and handline and **low** for all other commercial fishing fleets.

Significance of effect

21.9.2.18 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) include adherence to the FMMCP (M026) and implementation of the CFLO, OFLO, and FIR (M028), alongside the Cable Plan (M002), to reduce the potential impact pathway of spatial exclusion and disruption to inshore fishing activities within the OCAS through targeted liaison, route refinement, and proactive communication of installation schedules.

21.9.2.19 The significance of effect of reduction in access to, or exclusion from established fishing grounds within the OCAS to Commercial Fisheries receptors during the O&M phase is summarised in **Table 21-24**.

Table 21-24 Significance of effect of reduction in access to, or exclusion from established fishing grounds within the OCAS to commercial fisheries during the Operation and Maintenance phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting <12 m for lobster, brown crab, ballan wrasse etc	Low	High	M026 M027 M002 M028 M029 M030 M010 M032	Minor Adverse	Not Significant	During the O&M phase, small inshore potting vessels will experience long-term but limited spatial restriction along the OCAS due to surface-laid Array Cables to Landfall and rock bag stabilisation. An estimated 1.7% of the OCAS will remain inaccessible, dispersed along cable routes. While gear cannot be deployed directly over stabilised areas, most grounds will remain open, allowing continued fishing. Proactive communication through the FMMCP, CFLO and FIR will further mitigate access conflicts.
Potting >12 m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse	Not Significant	Larger offshore potting vessels have greater flexibility and operate mainly outside the OCAS. Limited interaction is anticipated with cable routes, and avoidance of stabilised areas will prevent gear damage.
Potting for nephrops	Negligible	Medium		Negligible	Not Significant	Nephrops potting occurs over muddy sediment habitats to the east of Lewis/*Eilean Leòdhais* and does not overlap with the OCAS. No direct or indirect effects are expected.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse	Not Significant	Demersal trawl and seine activity does not typically occur within the OCAS, with principal grounds located offshore. The presence of cables and stabilisation features is unlikely to restrict operations.
Demersal trawl fishery for nephrops	Negligible	Low		Negligible	Not Significant	Nephrops trawlers operate east of Lewis/*Eilean Leòdhais*, beyond the OCAS. No overlap or operational constraint is expected.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse	Not Significant	Pelagic trawlers operate midwater and do not interact with seabed infrastructure. Operations can resume normally across and around the OCAS, with no seabed contact.
Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse	Not Significant	The handline fleet operates seasonally within the OCAS and can resume full access during the O&M phase. Since handline gear does not contact the seabed, only minor temporary disruption may occur during maintenance.
Dredge for scallop	Low	Low		Minor Adverse	Not Significant	Scallop dredging is not an established activity within the OCAS. Occasional exploratory activity would be minimally affected by seabed infrastructure.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Set nets for white fish and rays	Low	High		Minor Adverse	Not Significant	Diving is restricted to shallow inshore habitats outside the OCAS, where suitable conditions for target species occur. No spatial overlap or access restriction is anticipated.
Commercial diving for shellfish	Low	High		Minor Adverse	Not Significant	Diving is restricted to shallow inshore habitats outside the OCAS, where suitable conditions for target species occur. No spatial overlap or access restriction is anticipated.
All other gears and fisheries	Low	Medium		Minor Adverse	Not Significant	Minor fisheries, such as longlining are not recorded within the OCAS and have minimal likelihood of overlap. Given embedded mitigation and communication mechanisms (FMMCP, CFLO, OFLO), potential effects are minor and localised.

This page has intentionally been left blank

Further Environmental Mitigation and Residual Effect

21.9.2.20 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.9.3 DISPLACEMENT LEADING TO GEAR CONFLICT AND INCREASED FISHING PRESSURE ON ADJACENT GROUNDS

21.9.3.1 The maximum design scenario relating to displacement leading to gear conflict and increased fishing pressure on adjacent grounds during the O&M phase are presented in **Table 21-10**.

Magnitude

21.9.3.2 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.9.3.3 Exclusion from fishing grounds during O&M of the Offshore Project may lead to increases in fishing effort in other areas that may already be exploited thereby leading to gear conflict. As defined in the FMMCP, maintenance activities would be communicated to the fishing industry via NtMs to allow fishing operators to be plan around maintenance works if necessary.

21.9.3.4 The displacement effect was assessed over the O&M phase of the Offshore Project of up to 35 years.

21.9.3.5 Given that potting can resume across the Offshore Project during the O&M phase, the magnitude of displacement impacts for UK potters (under and over 12 m fleets) is considered to be **low** adverse.

21.9.3.6 Given the low levels of fishing by mobile gears across the windfarm site, together with the assumption that potting would resume within the Array Area and OCAS the magnitude of impact of displacement during the O&M phase is considered to be **low** adverse for all other fisheries.

Sensitivity

21.9.3.7 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.9.3.8 The sensitivity is as described for the construction phase in Section 21.8.1, paragraphs 21.8.1.30 to 21.8.1.37 and summarised as **high** for potting gears (<12 m vessels), vessels deploying set nets and commercial diving for shellfish; **medium** for other potting gears and handline and **low** for all other commercial fishing fleets.

Significance of effect

21.9.3.9 The significance of effect of displacement leading to gear conflict and increased fishing pressure on adjacent grounds to Commercial Fisheries receptors during the O&M phase is summarised in **Table 21-25**.

Table 21-25 Significance of effect of displacement leading to gear conflict and increased fishing pressure on adjacent grounds to commercial fisheries during the Operation and Maintenance phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting <12 m for lobster, brown crab, ballan wrasse etc	Low	High	M026 M027 M028 M032 M030	Minor Adverse	Not Significant	During the O&M phase, displacement impacts are expected to be minimal across all commercial fisheries. The Offshore Project design allows the majority of fishing activity, particularly potting, to resume within both the Array Area and OCAS. The limited footprint of exclusion around turbines, cables, and stabilised infrastructure (<2% of the total area) significantly reduces the potential for vessels to be displaced into alternative or adjacent grounds.
Potting >12 m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse	Not Significant	
Potting for nephrops	Low	Medium		Minor Adverse	Not Significant	
Demersal trawl fishery for monkfish, haddock,	Low	Medium		Minor Adverse	Not Significant	
Demersal trawl fishery for nephrops	Low	Low		Minor Adverse	Not Significant	
Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse	Not Significant	
Handline targeting mackerel (and occasional blue fin tuna)	Low	Low		Minor Adverse	Not Significant	
Dredge for scallop	Low	Medium		Minor Adverse	Not Significant	

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Set nets for white fish and rays	Low	Low		Minor Adverse	Not Significant	
Commercial diving for shellfish	Low	High		Minor Adverse	Not Significant	
All other gears and fisheries	Low	Medium		Minor Adverse	Not Significant	

Further Environmental Mitigation and Residual Effect

21.9.3.10 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.9.4 DISPLACEMENT OR DISRUPTION OF COMMERCIALLY IMPORTANT FISH AND SHELLFISH RESOURCES

21.9.4.1 This section assesses the potential temporary subsequent impact for the owners of fishing vessels where commercially important stocks may be disturbed or displaced to a point where normal fishing practices would be affected. During the O&M phase, the introduction of hard substrates and noise and vibration may displace commercially important fish and shellfish populations from the area.

21.9.4.2 With respect to the magnitude of this impact on Commercial Fisheries, the overall significance of the effect on fish and shellfish species has been considered (i.e. both the magnitude and sensitivity of fish and shellfish species have been considered to assess the magnitude of impact on commercial fishing fleets).

21.9.4.3 The maximum design scenario relating to displacement or disruption of commercially important fish and shellfish resources during the construction phase are presented in **Table 21-10**.

Magnitude

21.9.4.4 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

Shellfish species

21.9.4.5 During O&M, the Offshore Project infrastructure will remain as fixed features on the seabed, occupying a small proportion of the total fishing grounds (<10% of the Array Area). The presence of turbine foundations, the offshore substation platform, and subsea cables will result in long-term but spatially limited obstructions to potting activity. Fishing will be able to resume across most of the Array Area, excluding small areas immediately surrounding surface-laid or stabilised cables and foundation bases.

21.9.4.6 From an ecological perspective, the physical presence of hard infrastructure may introduce localised habitat change, replacing areas of soft sediment with artificial hard substrate. This can increase habitat heterogeneity and provide additional refuges or foraging surfaces for benthic crustaceans. Observations from other operational offshore wind farms suggest that brown crab may benefit from increased prey availability around turbine foundations and rock armour, potentially resulting in minor positive effects on local foraging opportunities (e.g., Coates *et al.*,

2014; Krone *et al.,* 2013). Similar patterns have been documented for European lobster, with Thatcher *et al.* (2023) reporting that over 50% of all acoustic detections occurred within 35 m of scour protection, indicating strong use of artificial hard substrate within fixed-turbine OWFs. The authors propose that these behaviours reflect artificial reef effects created by the introduction of hard material into otherwise soft-sediment environments, which may enhance habitat suitability for commercially important crustaceans. These findings suggest that future fixed-turbine OWF developments may provide localised fishery opportunities where such artificial reef effects arise.

21.9.4.7 However, stakeholders have raised specific concerns relating to potential operational impacts on lobster populations, particularly the effects of electromagnetic fields (EMF) and heat emissions from both the Array Cables and Export Cables. Fishers have expressed apprehension that these factors may cause displacement of lobster and affect post-construction fishing success within the Offshore Project area, even once access is restored.

21.9.4.8 The ecological assessment undertaken for benthic and crustacean species (refer to **Chapter 11, Volume 2a**) concludes that exposure to EMF and heat at operational field strengths is well below thresholds known to affect lobster or brown crab behaviour, physiology, or distribution. Empirical studies indicate no measurable avoidance behaviour or reduction in catchability under comparable EMF conditions. Likewise, temperature changes at the seabed are expected to be negligible (<1°C) and localised around cable surfaces. As such, no displacement or physiological stress of lobster or brown crab populations is predicted, and no significant impacts to the commercial resource are expected.

21.9.4.9 Taking into account the moderate mobility, tolerance, and recolonisation potential of these species, the overall magnitude of operational impact is assessed as minor. Nonetheless, to address stakeholder concerns and support evidence-based management, a focus will be placed on monitoring of fishing operations surrounding the Offshore Project and periodic assessment of fisheries activity data, including lobster landings, pre, during and post construction. This monitoring will verify the assumptions of the EIAR and will inform any adaptive management through the FMMCP.

21.9.4.10 In summary, while stakeholder apprehension regarding EMF and heat-related effects on lobster and brown crab is acknowledged, all available ecological evidence indicates short-term disturbance, high recoverability, and no lasting impact on the resource. The overall effect is assessed as low magnitude, long-term, and not significant in EIA terms, with continued monitoring ensuring transparency and confidence for the local fishing community.

21.9.4.11 During O&M, no effects on other shellfish species or resources are predicted, noting that scallop and razor shell fisheries do not overlap with the Offshore Project footprint, and benthic habitats are expected to remain stable and support continued shellfish productivity.

Finfish and elasmobranch species

21.9.4.12 Following construction, turbine foundations, scour protection, and rock armour will permanently alter local seabed habitats, creating mixed and hard substrate areas. This change may benefit reef-associated species such as ballan wrasse by providing refuge and foraging habitat. Monkfish, turbot, and rays may redistribute locally but will adapt to surrounding undisturbed areas for foraging and spawning. As a highly migratory pelagic species, mackerel are not reliant on benthic habitats and are therefore unaffected by seabed alterations or the presence of turbine structures. These habitat changes are considered low magnitude and neutral to slightly beneficial.

21.9.4.13 Electromagnetic fields from operational subsea cables will be low intensity due to burial and rock protection. Species such as haddock, monkfish, and rays are not sensitive to EMF exposure at predicted field strengths, and no behavioural or physiological effects are anticipated. Therefore, EMF impacts are negligible.

21.9.4.14 Operational noise and vessel activity levels will be minor compared to construction and within the range of natural background variability. Fish are expected to habituate, and no avoidance or barrier effects are predicted. Effects are assessed as low magnitude, long-term, and not significant.

21.9.4.15 Overall, during the O&M phase, habitat adaptation and potential colonisation may benefit certain demersal and reef-associated species, while operational impacts such as EMF and vessel activity remain negligible. The project is not expected to affect the abundance, distribution, or recruitment of monkfish, haddock, turbot, ray species, ballan wrasse, mackerel or herring, and therefore will not disrupt commercial stock productivity or fishery viability.

21.9.4.16 Overall, for all Commercial Fisheries receptors targeting finfish and elasmobranch species, the magnitude of impact is assessed as Low Adverse.

Sensitivity

21.9.4.17 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.9.4.18 Given the reliance on fishing grounds across the local study area, together with relatively limited operational range, the inshore (<12 m) potting fleet targeting brown crab, lobster and ballan wrasse, the handline fleet targeting mackerel and the set net fleet targeting whitefish and ray are deemed to be of high vulnerability and medium recoverability; the sensitivity for these fleets is considered to be high.

21.9.4.19 The offshore (>12 m) potting fleet also targets grounds overlapping the Offshore Project, however have a wider operational range and greater opportunities for alternative fishing grounds. Overall, sensitivity is considered medium.

21.9.4.20 For all other fleets, due to the range of alternative areas targeted and the distribution of key commercial species throughout the Irish Sea, fleets are deemed to be of low vulnerability, high

recoverability and medium-low value. The sensitivity of the receptor for all other fleets is therefore considered to be low.

Significance of Effect

21.9.4.21 The Offshore Project embedded mitigation measures (as shown in **Table 21-11**) includes adherence to the OEMP (EMP) (M019) and Cable Plan (M002), alongside the INNS Management Plan (M006), to reduce the potential impact pathway of construction-related habitat disturbance and consequent displacement or behavioural disruption of commercially important fish and shellfish species.

21.9.4.22 The significance of effect of displacement or disruption of commercially important fish and shellfish resources to Commercial Fisheries receptors during the O&M phase is summarised in **Table 21-26**.

Table 21-26 Significance of effect of displacement or disruption of commercially important fish and shellfish resources to commercial fisheries during the Operation and Maintenance phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting <12 m for lobster, brown crab, ballan wrasse etc	Low Adverse	High	M002 M019 M004 M006 M026 M019 M021	Minor Adverse	Not Significant	Across all Commercial Fisheries receptors and species, no measurable effects on fish or shellfish resources are anticipated beyond the natural range of environmental variability and stock fluctuations. During O&M, the physical presence of offshore infrastructure will represent a small proportion of the total available habitat, with no population-level impacts expected. Species' natural mobility, behavioural adaptability, and recoverability ensure that any temporary displacement or redistribution will remain within normal ecological limits. Accordingly, effects on commercial resource abundance, distribution, or
Potting >12 m for lobster, brown crab, ballan wrasse etc	Low Adverse	Medium		Minor Adverse	Not Significant	
Potting for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for monkfish, haddock,	Low Adverse	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for nephrops	Low Adverse	Low		Minor Adverse	Not Significant	
Pelagic trawl targeting mackerel, herring and horse mackerel	Low Adverse	Low		Minor Adverse	Not Significant	
Handline targeting mackerel (and occasional blue fin tuna)	Low Adverse	High		Minor Adverse	Not Significant	
Dredge for scallop	Low Adverse	Low		Minor Adverse	Not Significant	

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Set nets for white fish and rays	Low Adverse	High		Minor Adverse	Not Significant	catch rates are predicted to be unaffected.
Commercial diving for shellfish	Low Adverse	Low		Minor Adverse	Not Significant	
All other gears and fisheries	Low Adverse	Low		Minor Adverse	Not Significant	

Further Environmental Mitigation and Residual Effect

21.9.4.23 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.9.5 INCREASED VESSEL TRAFFIC ASSOCIATED WITH THE OFFSHORE PROJECT WITHIN FISHING GROUNDS LEADING TO INTERFERENCE WITH FISHING ACTIVITY

21.9.5.1 The maximum design scenario relating to increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity during the O&M phase are presented in **Table 21-10**.

Magnitude

21.9.5.2 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.9.5.3 The O&M phase may last for up to 35 years with vessels related to the Offshore Project making a maximum of 32,034 trips to port and will include vessels which are RAM. As per the construction phase, Offshore Project vessels will be managed by marine coordination, carry AIS and be compliant with relevant Flag State regulations. Also, safety zones will be applied for including up to 500 m around structures where vessels are undertaking major maintenance work.

21.9.5.4 The magnitude of impact of interference of fishing activity due to the presence and transiting of maintenance vessels during the O&M phase is decreased compared to in the construction phase given that fewer Offshore Project vessels will generally be on-site at any time, noting the much longer duration of the O&M phase. The impact is predicted to be of regional spatial extent, long term duration, intermittent and with high reversibility. It is predicted that the impact will affect the receptor directly. Based on the low level of Offshore Project related vessel activity across a long time period, the magnitude is therefore, considered to be **low** for all fisheries.

Sensitivity

21.9.5.5 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.9.5.6 Potting and set net gear can be vulnerable to increased O&M vessel movements due to risk of entanglement of construction vessel propellers with marker buoys of fishing gear. It is noted that established shipping routes do currently cross the Offshore Project, and that the Offshore Project vessels are likely to follow these routes where practicable. The potting and set net fisheries are deemed to be of medium vulnerability to entanglement of gear with Offshore Project related vessel propellers and of restricted manoeuvrability, and the sensitivity is therefore, considered to be medium.

21.9.5.7 All other fishery fleets are expected to be in a position to avoid the Offshore Project related O&M vessel movements. The dredge, demersal otter trawl, handlining, commercial diving and pelagic trawl fleets are deemed to be of low vulnerability and the sensitivity is therefore, considered to be low.

Significance of Effect

21.9.5.8 The significance of effect of increased vessel traffic associated with the Offshore Project within fishing grounds leading to interference with fishing activity to Commercial Fisheries receptors during the O&M phase is summarised in **Table 21-27**.

Table 21-27 Significance of effect of increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity to commercial fisheries during the Operation and Maintenance phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting for lobster, brown crab, ballan wrasse etc	Low	Medium	M010 M029 M022 M028 M026 M027 M037	Minor Adverse	Not Significant	Although up to approximately 1,593 annual return trips to port are anticipated, this traffic will largely use established navigation and supply routes already frequented by commercial shipping. Consequently, the likelihood of interference with active fishing operations is low. Static gear types such as pots and set nets could occasionally experience operational inconvenience or risk of gear interaction near access corridors, but these events are expected to be rare and manageable through adherence to standard communication measures and notices to mariners (NtMs). Implementation of the FMMCP, together with continuous liaison via the CFLO, OFLO, and FIR, will ensure timely notification of maintenance schedules, minimising potential
Potting for nephrops	Low	Medium		Minor Adverse	Not Significant	
Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for nephrops	Low	Low		Minor Adverse	Not Significant	
Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse	Not Significant	
Handline targeting mackerel (and occasional blue fin tuna)	Low	Low		Minor Adverse	Not Significant	
Dredge for scallop	Low	Low		Minor Adverse	Not Significant	

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Set nets for white fish and rays	Low	Low		Minor Adverse	Not Significant	interference and enabling fishers to plan activity safely around O&M vessel movements.
Commercial diving for shellfish	Low	Low		Minor Adverse	Not Significant	
All other gears and fisheries	Low	Low		Minor Adverse	Not Significant	

Further Environmental Mitigation and Residual Effect

21.9.5.9 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.9.6 ADDITIONAL STEAMING TO ALTERNATIVE FISHING GROUNDS

21.9.6.1 The maximum design scenario relating to additional steaming to alternative fishing grounds during the construction phase are presented in **Table 21-10**.

Magnitude

21.9.6.2 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.9.6.3 During the O&M phase, fishing will be possible across the Offshore Project, with the exception of:

- In the footprint of installed infrastructure (and a 50 m advisory safe operating distance from WTG/OSP at the surface);
- In the footprint of surface laid Array Cables and Array Cables to Landfall and associated cable stabilisation (and a 50 m advisory safe operating distance);
- Safety Zones around infrastructure undergoing major maintenance;
- Advisory exclusion zones around vessels undertaking major maintenance activities;
- Such activities will be communicated through NtMs and Kingfisher Bulletins with ample warning provided.

21.9.6.4 It is understood that the individual decisions made by the skippers of fishing vessels with their own perception of risk will determine the likelihood of whether their fishing will resume within the Array Area and OCAS. As such, it is acknowledged that whilst additional steaming to alternative grounds will not be necessary, skippers may choose to steam to grounds outside of the Offshore Project.

21.9.6.5 Overall, the area impacted by the Offshore Project infrastructure relates to a permanent loss of:

- Within the Array Area: 10.74 km^2 (60 WTGs, 1 OSP with 50 m safe operating distance, equates to 0.48 km^2; plus 180 km of Array Cables of up to 7 m width and 50 m safe operating distance, equates to 10.26 km^2) within the Array Area of 161 km^2 i.e., approximately 7% of the Array Area;
- Within the OCAS: 12 Array Cables to Landfall spread out within the OCAS.

21.9.6.6 Potting for lobster, crab and ballan wrasse (<12m vessels): The local potting fleet, operating seasonally from Carloway/*Càrlabhagh* in inshore waters, typically shifts east of Lewis/*Eilean Leòdhais* during certain times of the year. As potting activity is expected to resume within the Offshore Project area, no substantial deviation from established operational patterns or steaming distances is anticipated. While some short-term adjustment may occur during construction, long-

term access to traditional grounds is likely to be maintained, and fishers are not expected to require relocation to alternative ports. Consequently, the magnitude of impact is assessed as low, reflecting the fleet's ability to continue operating within its normal seasonal range and established grounds.

21.9.6.7 For the potting fleet over 12 m in length, which typically operates across a wider range of offshore grounds beyond 6 nm, the magnitude of impact is also assessed as **low**. These vessels are accustomed to operating over broader spatial areas and have the operational capacity to adapt within their normal geographic range. As access to grounds outside 6 nm is expected to resume within the Offshore Project boundaries during the O&Ml phase, no significant increase in steaming distance or requirement to relocate to alternative ports is anticipated. While temporary adjustments may arise during construction, long-term disruption to established patterns of use is unlikely, and the fleet is expected to maintain its typical seasonal distribution and fishing effort within the wider region.

21.9.6.8 For set net fisheries, including gillnet and tangle net operations, the magnitude of impact is also assessed as **low**. These fleets typically deploy gear within established seasonal grounds and, similar to the local potting sector, are expected to resume fishing activity within and around the Offshore Project area once construction is complete. Given that resumption of access is anticipated and no long-term exclusion is proposed, no additional steaming beyond normal operating patterns is expected. While short-term adjustments may occur during construction, set net vessels are not expected to deviate significantly from their traditional fishing range or require relocation to alternative ports. As such, long-term disruption to operational practice is considered limited.

21.9.6.9 Handline mackerel: This fishery will not be affected during the O&M phase, as inshore waters, including those within the OCAS, will remain accessible. Therefore, the magnitude of impact is considered **low**.

21.9.6.10 All other fisheries: Other gear types do not routinely target these grounds, and therefore additional steaming is not anticipated. The magnitude of impact is considered **low**.

Sensitivity

21.9.6.11 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.9.6.12 The sensitivity is as described for construction in paragraphs 21.8.6.5 to 21.8.6.8, summarised as **medium** for potting for lobster, crab and ballan wrasse, handlining and set nets fleets and **low** for all other fisheries.

Significance of Effect

21.9.6.13 The significance of effect of additional steaming to alternative fishing grounds within fishing grounds leading to interference with fishing activity to Commercial Fisheries receptors during the O&M phase is summarised in **Table 21-28**.

Table 21-28 Significance of effect of additional steaming to alternative fishing grounds to commercial fisheries during the Operation and Maintenance phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting for lobster, brown crab, ballan wrasse etc	Low	Medium	M026 M002 M032 M038 M029 M037	Minor Adverse	Not Significant	During the O&M phase, the Offshore Project design will enable most fishing activity to continue across the Array Area and OCAS, except within safety zones and/or exclusion zones surrounding major maintenance activities. No substantial deviation from existing operational patterns or steaming distances is anticipated for any fleet. Fishers are expected to continue operating within their established seasonal ranges, with potting and set net fleets resuming activity between and around turbine locations, and mobile gears maintaining their typical offshore grounds. While individual skippers may choose to temporarily operate further afield based on personal risk perception, fishing operations will not require significant rerouting or relocation,
Potting for nephrops	Low	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse	Not Significant	
Demersal trawl fishery for nephrops	Low	Low		Minor Adverse	Not Significant	
Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse	Not Significant	
Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse	Not Significant	
Dredge for scallop	Low	Low		Minor Adverse	Not Significant	
Set nets for white fish and rays	Low	Low		Minor Adverse	Not Significant	

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Commercial diving for shellfish	Low	Low		Minor Adverse	Not Significant	and fuel and time costs associated with potential diversions will be minor.
All other gears and fisheries	Low	Low		Minor Adverse	Not Significant	

Further Environmental Mitigation and Residual Effect

21.9.6.14 No additional Commercial Fisheries mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the embedded commitments outlined in **Table 21-11**) is **Not Significant** in EIA terms.

21.9.7 PHYSICAL PRESENCE OF INFRASTRUCTURE LEADING TO GEAR SNAGGING

21.9.7.1 The physical presence of Offshore Project related infrastructure on the seabed represents potential snagging points for fishing gear and could lead to damage to, or loss of, fishing gear. The safety aspects including potential loss of life as a result of snagging risk are assessed within **Chapter 16, Volume 2a**. During O&M phase, 500 m Safety Zones will be enacted around major maintenance activities and 500 m advisory exclusion zones around maintenance vessels. When no maintenance is underway, a 50 m advisory safety distance is assumed for all Offshore Project infrastructure that is surface piercing and/or on the seabed (e.g., surface laid cable and associated cable protection and/or cable stabilisation.

21.9.7.2 The maximum design scenario relating to physical presence of infrastructure leading to gear snagging during the construction phase are presented in **Table 21-10**.

Magnitude

21.9.7.3 The magnitude of impact is based on the criteria detailed in **Table 21-7**. A description of the likely magnitude of impact on receptors caused by each identified impact is given in the following paragraphs.

21.9.7.4 The protocols outlined for construction (Section 21.8.7), will be followed during O&M phase. The magnitude of effect is assessed to be the same as during construction and considered to be **medium** adverse for potting for lobster, brown crab and ballan wrasse (all vessel lengths) and set nets for white fish and rays; and **low** adverse for all fleets.

Sensitivity

21.9.7.5 The sensitivity described for each receptor is based on the criteria provided in **Table 21-8**.

21.9.7.6 The sensitivity is as described for construction (Section 21.8.7), summarised as **low** for pelagic trawl and handline and **medium** for all other fisheries.

Significance of effect

21.9.7.7 Significance of effect of physical presence of infrastructure leading to gear snagging to Commercial Fisheries during the O&M phase is detailed in **Table 21-29**.

Table 21-29 Significance of effect of physical presence of infrastructure leading to gear snagging to commercial fisheries during the Operation and Maintenance phase

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Potting for lobster, brown crab, ballan wrasse etc	Medium	Medium	M030 M032 M038 M033 M014 M011 M012 M013	**Moderate Adverse**	**Significant**	Potting vessels, both inshore (<12 m) and offshore (≥12 m), remain moderately exposed to snagging risks due to interaction with fixed subsea infrastructure such as surface-laid cables and limited rock bag stabilisation across the Array Area and OCAS. Although pots are static, tidal movement can cause occasional entanglement. However, with the infrastructure fully installed, clearly charted, and well-communicated through the FMMCP and FLOWW protocols, snagging risk is stable, localised, and manageable.
Potting for nephrops	Low	Medium		Minor Adverse	Not Significant	These fisheries occur on muddy grounds well east of the Offshore Project area and do not overlap with installed cables or infrastructure. The snagging risk remains negligible under operational conditions.
Demersal trawl fishery for monkfish, haddock,	Low	Medium		Minor Adverse	Not Significant	Actively towed demersal gears inherently carry snagging potential when operating near seabed infrastructure. However, trawl activity is rare within the Offshore Project footprint, and vessels can safely avoid cable routes using updated navigational information. Residual risk of gear loss or damage remains minimal.

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
Demersal trawl fishery for nephrops	Low	Medium		Minor Adverse	Not Significant	Nephrops trawling grounds do not intersect with the Offshore Project area, and no interaction with seabed infrastructure is anticipated.
Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse	Not Significant	Pelagic trawlers operate midwater and have no physical interaction with seabed structures. O&M phase snagging risk is negligible.
Handline targeting mackerel (and occasional blue fin tuna)	Low	Low		Minor Adverse	Not Significant	Handline gear operates at surface or midwater and avoids seabed infrastructure entirely. No snagging potential exists during the O&M phase.
Dredge for scallop	Low	Medium		Minor Adverse	Not Significant	Although dredging involves direct seabed contact, it is not practised within the Offshore Project footprint. The risk of snagging on operational infrastructure is therefore theoretical only.
Set nets for white fish and rays	Low	Medium		**Moderate Adverse**	**Significant**	Set nets remain the gear type most vulnerable to snagging due to their static placement on the seabed. However, with the layout of turbines and cable routes now fixed and clearly charted, the likelihood of unintentional deployment over infrastructure is low. Ongoing liaison

Receptor	Magnitude	Sensitivity	Embedded mitigation measures	Significance	Significance	Commentary
						through the CFLO and adherence to advisory distances will continue to mitigate this risk effectively.
Commercial diving for shellfish	Low	Medium		Minor Adverse	Not Significant	Diving activity is restricted to shallow coastal waters outside the Offshore Project area. No interaction with operational infrastructure is anticipated.
All other gears and fisheries	Low	Medium		Minor Adverse	Not Significant	Other minor gear types (e.g., longline, small static gear) operate infrequently and have minimal overlap with the Project footprint. Adherence to the FMMCP and standard industry guidance (e.g. FLOWW) ensures negligible snagging risk during the O&M phase.

This page has intentionally been left blank

Further Environmental Mitigation

21.9.7.8 The further environmental mitigation described in **Table 21-13**, **Table 21-15**, and **Table 21-17** maximise the resumption of fishing within the Offshore Project and therefore minimise the potential for snagging to occur.

Significance of Residual Effect

21.9.7.9 Potting for lobster, brown crab, ballan wrasse etc (all vessel lengths) and set nets for white fish and rays: The additional mitigation presented **Table 21-13**, **Table 21-15**, and **Table 21-17** will maximise the opportunity for fishing to resume without risk of gear snagging. Based on the successful application of this additional mitigation, the residual effect of this impact during construction is reduced to Minor Adverse significance, which is **Not Significant** in EIA terms.

21.9.7.10 All other Commercial Fisheries receptors: The significance of residual effect remains as presented in **Table 21-21** summarised as Minor Adverse for all fleets, which is **Not Significant** in EIA terms.

21.10 ASSESSMENT OF EFFECTS: DECOMMISSIONING

21.10.1.1 The decommissioning sequence will generally be the reverse of the construction sequence and involve similar types and numbers of vessels and equipment. It is assumed that the decommissioning phase will have a similar duration as the construction phase.

21.10.2 REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS WITHIN THE ARRAY AREA

21.10.2.1 The significance of effect of decommissioning activities are expected to be the same or similar to the effects from construction, which are summarised below. The additional mitigation measures established for the construction phase will also be implemented during the decommissioning phase.

21.10.2.2 For all Commercial Fisheries receptors, the residual effect is of **Minor Adverse** significance to Negligible, which is **Not Significant** in EIA terms.

21.10.3 REDUCTION IN ACCESS TO, OR EXCLUSION FROM ESTABLISHED FISHING GROUNDS WITHIN THE OFFSHORE CABLE AREA OF SEARCH

21.10.3.1 The significance of effect of decommissioning activities are expected to be the same or similar to the effects from construction, which are summarised below. The additional mitigation measures established for the construction phase will also be implemented during the decommissioning phase.

21.10.3.2 For all Commercial Fisheries receptors, the residual effect is of **Minor Adverse** significance to Negligible, which is **Not Significant** in EIA terms.

21.10.4 DISPLACEMENT LEADING TO GEAR CONFLICT AND INCREASED FISHING PRESSURE ON ADJACENT GROUNDS

21.10.4.1 The significance of effect of decommissioning activities are expected to be the same or similar to the effects from construction, which are summarised below. The additional mitigation measures established for the construction phase will also be implemented during the decommissioning phase.

21.10.4.2 For all Commercial Fisheries receptors, the residual effect is of **Minor Adverse** significance, which is **Not Significant** in EIA terms.

21.10.5 DISPLACEMENT OR DISRUPTION OF COMMERCIALLY IMPORTANT FISH AND SHELLFISH RESOURCES

21.10.5.1 The significance of effect of decommissioning activities are expected to be the same or similar to the effects from construction.

21.10.5.2 For all Commercial Fisheries receptors, the residual effect is of **Minor Adverse** significance, which is **Not Significant** in EIA terms.

21.10.6 INCREASED VESSEL TRAFFIC ASSOCIATED WITH THE OFFSHORE PROJECT WITHIN FISHING GROUNDS LEADING TO INTERFERENCE WITH FISHING ACTIVITY

21.10.6.1 The significance of effect of decommissioning activities are expected to be the same or similar to the effects from construction.

21.10.6.2 For all Commercial Fisheries receptors, the residual effect is of **Minor Adverse** significance, which is **Not Significant** in EIA terms.

21.10.7 ADDITIONAL STEAMING TO ALTERNATIVE FISHING GROUNDS

21.10.7.1 The significance of effect of decommissioning activities are expected to be the same or similar to the effects from construction.

21.10.7.2 For all Commercial Fisheries receptors, the residual effect is of **Minor Adverse** significance, which is **Not Significant** in EIA terms.

21.10.8 PHYSICAL PRESENCE OF INFRASTRUCTURE LEADING TO GEAR SNAGGING

21.10.8.1 The significance of effect of decommissioning activities are expected to be the same or similar to the effects from construction. The additional mitigation measures established for the construction phase will also be implemented during the decommissioning phase.

21.10.8.2 For all Commercial Fisheries receptors, the residual effect is of **Minor Adverse** significance, which is **Not Significant** in EIA terms.

21.11 ASSESSMENT OF COMBINED EFFECTS

21.11.1.1 The combined effects assessment considers likely significant effects from multiple impacts and activities from the construction, O&M, and decommissioning phases of the Offshore Project on the same receptor, or group of receptors. The overall method following in identifying and assessing potential Combined Effects in relation to the offshore environment is set out in **Chapter 5, Volume 1a**.

21.11.1.2 Combined effects could potentially arise in one of two ways. The first type of combined effect is a Project lifetime effect, where multiple phases of the Project (construction, O&M, and decommissioning) interact to create a potentially more significant effect on a receptor than in one phase alone.

21.11.1.3 The second type of combined effect is receptor-led effects. Receptor-led effects are where effects from different environmental aspects combine spatially and temporally on a receptor. These effects may be short-term, temporary, transient, or longer-term.

21.11.1.4 Receptor-led effects have been considered, where relevant, in this chapter for potential interactions between commercial fisheries and the following environmental aspects:

- **Chapter 6, Volume 2a;**
- **Chapter 11, Volume 2a;**
- **Chapter 12, Volume 2a;**
- **Chapter 16, Volume 2a.**

21.11.1.5 Full results of the Project lifetime effects and receptor-led effects assessment can be found in **Chapter 23: Combined Effects Assessment, Volume 2a**.

21.12 CONSIDERATION OF ONSHORE TRANSMISSION WORKS PROJECT

21.12.1.1 A separate application for the Project's onshore elements (the OTW Project) that includes all infrastructure landwards of Mean Low Water Springs (MLWS) within the Onshore Transmission Works Boundary will be made, under the Town and Country Planning (Scotland) Act 1997 to Comhairle nan Eilean Siar (CnES). The OTW Project EIAR will provide a full description of the onshore elements of the Project landward of MLWS, and include an assessment of the associated likely significant effects.

21.12.1.2 This EIAR has considered the additive interactions between the Offshore Project and OTW Project to understand if there is the potential for any change to the assessment outcomes as a result of both elements of the Project. The approach to identify and consider potential interactions between the Offshore Project and OTW Project is set out in **Chapter 5, Volume 1a** and key design parameters associated with the OTW Project are summarised in **Chapter 3**, **Volume 1a**.

21.12.1.3 The potential for effects identified in **Table 21-30** to interact with effects associated with the OTW Project at a common receptor included within the commercial fisheries assessment (i.e. receptors which have the potential to experience effects from both projects) has been considered. However, the Zone of Influence associated with Commercial Fisheries is limited spatially to the marine environment and only has the potential to cause an effect on receptors which are in the marine environment. Further to this, the only activity to occur between MHWS and MLWS are associated with HDD and cable installation that will occur under the seabed. The works above the seabed associated with this (i.e. HDD Exit Pit construction and cable pull through vessel activities) are considered within this chapter already. As the works between MHWS and MLWS are below the seabed there is no potential for impact to Commercial Fisheries receptors. Following consideration of the OTW Project and likely ZOI and influence on common receptors, there are no pathways that have the potential to effect Commercial Fisheries receptors. As a result of this, there is no pathway for these effects to interact in addition to the OTW Project and this is not considered further. Furthermore, the proposed onshore landfall location is not associated with a fishing harbour or port and, therefore, no effects on commercial fisheries are anticipated from the OTW Project.

21.13 ASSESSMENT OF CUMULATIVE EFFECTS

21.13.1 APPROACH

21.13.1.1 The CEA examines the combined impacts of the Offshore Project in combination with other developments (including the OTW Project, as well as the contribution of the Offshore Project to those impacts) on the same single receptor or resource. It also considers the interaction of impacts from individual environmental aspects within the Offshore Project itself on the same single receptor or resource. The overall method followed in identifying and assessing potential cumulative effects is set out in **Chapter 5, Volume 1a**.

21.13.1.2 The offshore screening approach is based on the Planning Inspectorate's Advice Note Nine (Planning Inspectorate, 2018) and Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment, which builds on Advice Note Seventeen (Planning Inspectorate, 2025), with relevant components of the RenewableUK accepted guidance (RenewableUK, 2013), which includes aspects specific to the marine elements of an offshore wind farm, addressing the need to consider mobile wide-ranging species (foraging species, migratory routes etc).

21.13.1.3 The conclusions of the assessment of the Offshore Project and any additional effect arising from the OTW Project as identified in this chapter have been considered in this CEA. However, given the assumed mitigation and conclusion drawn within Section 21.12, there are no material additional impacts resulting from the OTW Project.

21.13.2 CUMULATIVE EFFECTS ASSESSMENT

21.13.2.1 For Commercial Fisheries, a ZOI of the ICES Division West of Scotland/*Alba* (6a) has been applied to ensure direct and indirect cumulative effects can be appropriately identified and assessed. The commercial fisheries ZOI is shown in **Figure 21.1, Volume 2c**.

21.13.2.2 The use of the ICES Division West of Scotland as the spatial extent for the cumulative zone of influence for the Offshore Project is appropriate as it captures the full range of relevant marine activities and receptor interactions for Commercial Fisheries. This area encompasses existing and planned offshore wind projects, MPAs, and fishing grounds along the west coast of Scotland/*Alba*, including those adjacent to the Outer Hebrides/*Na h-Eileanan Sia*. It reflects the operational range of vessels active within the Offshore Project area, particularly static gear vessels such as creelers and scallop divers, as well as mobile gear vessels transiting between the west coast, east coast, and mainland ports. This spatial extent accounts for displacement patterns, seasonal movement of fleets, and access to overlapping grounds, ensuring that cumulative effects are assessed across the realistic area of influence for the affected fishing sectors. The zone is therefore considered representative and proportionate, reflecting where vessels currently operate and where displacement or redistribution of effort is most likely to occur.

21.13.2.3 A short list of Other Developments that may interact with the Offshore Project ZOIs during their construction, operation or decommissioning is presented in **Appendix 5.3: Cumulative effects assessment shortlisted developments, Volume 1c**. This list has been generated applying criteria set out in **Chapter 5, Volume 1a** and has been collated up to the finalisation of the EIA through desk study, consultation, and engagement.

21.13.2.4 Only those Other Developments in the short list that fall within the Commercial Fisheries ZOI have the potential to result in cumulative effects with the Offshore Project on Commercial Fisheries. All 'other developments' falling outside the Commercial Fisheries ZOI are excluded from this assessment. The following types of Other Development have the potential to result in cumulative effects on Commercial Fisheries:

- Other OWF that could result in reduced access or loss of fishing grounds and associated displacement, affecting the same fleets which could potentially also be affected by the Offshore Project;
- Other OWF that could result in effects to commercial fish and shellfish species, affecting the same commercial resources which could potentially also be affected by the Offshore Project;
- MPAs that could result in management measures that are applicable to Commercial Fisheries, affecting the same fleets which could potentially also be affected by the Offshore Project.

21.13.2.5 On the basis of the above, the Other Developments that are scoped into the Commercial Fisheries CEA are outlined in **Table 21-30** and presented in **Figure 21.7, Volume 2b**. The cumulative project design envelope for Commercial Fisheries is provided in **Table 21-31.**

Table 21-30 Other Developments considered as part of the Commercial Fisheries CEA

ID	Development type	Application reference	Description of development	Status	Timescale[1]	Confidence in assessments	Tier[2]	Distance to the Array Area	Distance to the OCAS
1	Offshore Wind Farm	OWF-027	West of Orkney Offshore Wind Farm	Consented	Operational by 2030	High	1	128 km	126 km
2	Offshore Wind Farm	OWF-024	Talisk Offshore Wind Project	In Planning - scoping report submitted	Construction is anticipated to begin in 2029, become operational in 2032 and decommissioned in 2077.	Medium	2	28 km	32 km
3	Offshore Wind Farm	OWF-026	Havbredey	In Planning - scoping report submitted	Construction is anticipated to begin in 2030, become operational in 2035 and decommissioned in 2060.	Medium	2	55 km	55 km

[1] The Planning Inspectorate *Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment* states '*Where other developments are expected to be completed before construction of the proposed Major Infrastructure Project and the effects of those projects are fully determined, effects arising from them should be considered as part of the baseline and may be considered as part of both the construction and operational assessment.*'

[2] ***Chapter 5, Volume 2a*** *sets out the full definitions of the tiers. Tier 1: high level of certainty or information availability (including under construction or where a planning application has been approved or is awaiting decision). Tier 2: medium level of certainty or information (such as developments where a Scoping Report has been submitted). Tier 3: low level of certainty or information available (no planning applications submitted or identified for potential future development only).*

ID	Development type	Application reference	Description of development	Status	Timescale[1]	Confidence in assessments	Tier[2]	Distance to the Array Area	Distance to the OCAS
4	Offshore Wind Farm		MachairWind	In Planning - scoping report submitted	Operational by 2030	Medium	2	240 km	245 km
5	Nature conservation designations		MPAs including 9 Offshore MPAs (including Seas of St Kilda, Geikle Slide and Hebridean Slope) and over 20 marine SACs including Loch Roag Lagoons, Solan Bank Reef, Inner Hebrides and the Minches) as shown in **Figure 21.7, Volume 2b**.	MPAs designated	Management implementation expected by end of 2026	Medium	2	21 km to 341 km	18 km to 343 km

Table 21-31 Cumulative Project Design Envelope for Commercial Fisheries

Project phase and activity / impact	Scenario	Justification
All phases		
Reduction in Access to, or Exclusion from Established Fishing Grounds	Tier 1: • Full build out of West of Orkney Offshore Wind Farm Tier 2: • Full build out of Talisk, Havbredey and MachairWind Offshore Wind Farm • Implementation of total restriction to all mobile gear and partial restriction to static gear within MPAs	The cumulative scenario considers the potential for overlapping or sequential spatial restrictions and increased exclusion areas across multiple offshore wind projects and management measures. The envelope represents a realistic upper-bound estimate of combined spatial and temporal disturbance to fishing activity.
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds		
Displacement or disruption of commercially important fish and shellfish resources		

This page has intentionally been left blank

21.13.2.6 A description of the significance of cumulative effects upon Commercial Fisheries receptors arising from each identified impact is given below. The cumulative effects assessment has been based on information publicly available in the planning application documents for the Other Developments. It is noted that the maximum assessment assumptions quoted within these planning applications (EIARs) are often refined during the determination period and in the post-consent phase such that the final scheme's build out may have a reduced impact when compared to what has previously been assessed.

21.13.3 CONSTRUCTION

Reduction in Access to, or Exclusion from Established Fishing Grounds

21.13.3.1 There is potential for cumulative reduction in access to or exclusion from established fishing grounds as a result of construction activities associated with the Offshore Project and other projects. For the purposes of this EIAR, this additive impact has been assessed within the west of Scotland/*Alba*, which is considered to be representative of the fishing grounds exploited by the fleets active across the regional Study Area.

Magnitude

21.13.3.2 Tier 1: 1 OWF has been included in the Tier 1 assessment, as this has recently obtained planning consent: West of Orkney Offshore Wind Farm which is has fixed foundations.

21.13.3.3 Temporary loss or restricted access to fishing grounds was identified as a significant impact during construction, primarily affecting creelers and scallop dredgers within the West of Orkney Array Area. This was assessed based on fisheries activities in the area being dependent on spatially discrete and seasonally targeted grounds including overlapping with planned infrastructure. The assessment concluded that, with the implementation of mitigation measures, including coordinated fisheries liaison, advance notification, and spatial planning to minimise conflict, the residual impact was reduced to minor and not significant. During the O&M phase, loss of access is assessed as low due to the expected burial of cables and the potential for co-existence of fishing activities with wind farm infrastructure.

21.13.3.4 The mitigation measures developed for the West of Orkney Windfarm, including the implementation of a Fisheries Management and Mitigation Strategy, sustained engagement with affected fishers, and project-specific cooperation agreements, are expected to effectively manage and reduce impacts on Commercial Fisheries. These measures will help ensure that a cumulative impact does not arise in combination with the Offshore Project, particularly given the limited spatial and operational overlap of fishing fleet activity between the 2 project areas. The primary fleets operating in each location differ in type, scale, and geographical focus, and the distance between the projects further reduces the likelihood of cumulative access issues. As such, the magnitude of cumulative effects is considered **low** for all fleets.

21.13.3.5 Tier 2: 3 offshore wind farms (Talisk, Havbredey, and MachairWind) and relevant Marine Protected Areas (MPAs) are included within the Tier 2 cumulative assessment.

21.13.3.6 Talisk Offshore Wind Farm is a proposed floating development located approximately 25 km north of Lewis/*Eilean Leòdhais*, comprising up to 33 wind turbine generators (WTGs), associated floating substructures, inter-array and export cables, an offshore substation, and a landfall on Lewis/*Eilean Leòdhais*. The project is currently at pre-application/scoping stage, and a full Commercial Fisheries assessment has not yet been undertaken. Scoping documentation assumes that any significant effects on fishing access during construction would be mitigated through standard measures such as coordinated fisheries liaison, advance notification of works, and spatial planning to minimise overlap with fishing grounds.

21.13.3.7 Available baseline information indicates that the key local potting fleet does not typically operate across the Talisk array area; however, nearshore and landfall works could overlap seasonally with vessels re-basing to the east side of Lewis/*Eilean Leòdhais*, which may be affected by cable installation and any necessary cable protection. With appropriate mitigation, residual effects on access for static gears are anticipated to be minor and not significant.

21.13.3.8 Havbredey Offshore Wind Farm, located approximately 52 km from the Offshore Project, and MachairWind Offshore Wind Farm, located approximately 240 km away, are both at early stages of development. Limited detail is currently available regarding their array layouts, cable routes, or proposed construction methodologies. No full Commercial Fisheries assessments have yet been published, and key parameters such as cable landfall locations and potential nearshore interactions remain unspecified.

21.13.3.9 Given their offshore siting and distance from the Offshore Project area, it is highly unlikely that the local potting fleets operating from the west coast of Lewis/*Eilean Leòdhais* would extend fishing activity to these areas. These fleets demonstrate strong dependency on local inshore grounds and do not exhibit the operational range required to interact with distant offshore developments such as Havbredey or MachairWind. Similarly, set-net fisheries, which are highly seasonal and spatially constrained, are not expected to overlap with either development area. While future export cable routing associated with these projects may traverse Scottish waters, the absence of defined routes at this stage means no plausible interaction with the same nearshore receptor groups can be established.

21.13.3.10 Cumulative effects on the mobile sector also remain limited, as mobile demersal and pelagic fleets already exhibit broad operational ranges, and the Offshore Project itself presents a low level of constraint to these gears.

21.13.3.11 In terms of wider policy context and potential in-combination influences, several relevant MPAs are designated or progressing management measures that may constrain mobile bottom-contact gears. The West Shetland Shelf MPA has proposed restrictions on mobile demersal fishing to protect sands and gravels, with measures updated following the 2024 consultation. The North-east

Lewis MPA is designated for Risso's dolphin and sandeel features, with conservation and management advice in place and measures being developed under the national programme. The Shiant East Bank MPA is designated for sandeel and geomorphological features, with management advice and monitoring underway; future fisheries measures may focus on protecting key sandeel habitats. These measures primarily relate to mobile gears, whereas potting and set-net activity do not typically extend across the relevant offshore areas, further reducing potential overlap.

21.13.3.12 Overall, considering the status of the 3 Tier 2 projects, their anticipated mitigation measures, the spatial behaviour of local fleets, and the direction of MPA management, the cumulative magnitude of effects on access and displacement is assessed as **low** for all receptors, with no material pathway for significant cumulative loss of access once mitigation is applied.

21.13.3.13 Tier 3: No additional projects have been identified at Tier 3. Accordingly, there are no further developments that would alter or elevate the level of effect beyond that determined under Tier 2.

Sensitivity

21.13.3.14 The sensitivity is as assessed for Offshore Project alone effects, summarised as high for local potting <12 m vessels, high for set nets, high for commercial diving for shellfish, medium for potting by 12 m and over vessels and vessels targeting nephrops, handline for mackerel; and low for all other fisheries.

Significance of cumulative effect

21.13.3.15 All fisheries: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptors ranges from low to high. The effect will therefore be of **minor adverse** significance, which is **Not Significant** in EIA terms.

Displacement leading to gear conflict and increased fishing pressure on adjacent grounds

21.13.3.16 There is potential for cumulative displacement leading to conflict and increase fishing pressure as a result of construction activities associated with the Offshore Project and other projects. For the purposes of this EIAR, this additive impact has been assessed within the west of Scotland/*Alba*, which is considered to be representative of the fishing grounds exploited by the fleets active across the regional Study Area.

Magnitude

21.13.3.17 Tier 1: 1 offshore wind farm has been included in the Tier 1 assessment: the West of Orkney Offshore Wind Farm, which has recently obtained planning consent and comprises fixed foundations. Within the West of Orkney Array Area, temporary displacement of fishing activity was identified during construction, primarily affecting creeling and scallop dredge fleets. However, the assessment concluded that displacement was unlikely to result in gear conflict or increased pressure on adjacent grounds due to the availability of alternative grounds and broader operational ranges of the affected fleets. Mitigation measures, including coordinated fisheries

liaison, temporal planning of construction activities, and clear communication protocols, were considered effective in reducing the risk of inter-fleet conflict. During the O&M phase, anticipated coexistence and cable burial further reduce the likelihood of displacement-driven gear interaction. Given spatial separation and differences in fleet composition between West of Orkney and the Offshore Project, no cumulative pathway for gear conflict is anticipated at Tier 1, and the magnitude of effect is considered Low for all fleets.

21.13.3.18 Tier 2: At Tier 2, cumulative consideration includes the Talisk, Havbredey, and MachairWind Offshore Wind Farms, along with relevant MPAs.

21.13.3.19 Talisk Offshore Wind Farm is a floating project located approximately 25 km north of Lewis/*Eilean Leòdhais*, comprising up to 33 WTGs, associated floating substructures, inter-array and export cables, an offshore substation, and a landfall on Lewis/*Eilean Leòdhais*. The project is currently at pre-application/scoping stage, and a full Commercial Fisheries assessment has not yet been undertaken. While the Talisk array itself lies beyond the core grounds used by local static gear fleets from west Lewis/*Eilean Leòdhais*, the proposed export cable routes and landfall have potential to interact seasonally with inshore potting vessels, which may temporarily rebase to the east coast. During cable installation, displacement could compress potting effort into smaller areas, increasing intra-fleet competition and overlap with mobile gears, particularly demersal or nephrops trawlers operating in adjacent muddy grounds.

21.13.3.20 Havbredey Offshore Wind Farm, located approximately 52 km from the Offshore Project, and MachairWind Offshore Wind Farm, approximately 240 km away, are both at early development stages, with limited information currently available on their array layouts, cable routes, or construction methodologies. No full Commercial Fisheries assessments have yet been published, and key parameters such as cable landfall locations and potential nearshore interactions remain undefined. Given their offshore locations and distance from west Lewis/*Eilean Leòdhais*, it is highly unlikely that local potting fleets would operate within or near these development areas. These fleets exhibit strong dependency on local inshore grounds and do not have the operational range to interact with distant offshore projects. Similarly, set-net fisheries, which are highly seasonal and spatially constrained, are not expected to overlap with these areas. While future export cable routes for Havbredey or MachairWind could traverse Scottish waters, no defined routes currently exist, and therefore no plausible interaction with the same nearshore receptor groups can be established.

21.13.3.21 Cumulatively, evolving management measures within MPAs—such as those proposed for the North-east Lewis MPA, West Shetland Shelf MPA, and Shiant East Bank MPA—may influence fishing activity. These measures, primarily targeting mobile bottom-contact gears, could displace some elements of the mobile sector into areas traditionally used by potters, potentially intensifying spatial competition. However, such redistribution is expected to be gradual and localised.

21.13.3.22 Despite these potential pressures, any significant displacement or conflict is expected to be mitigated through project-specific measures such as coordinated fisheries liaison, temporal

planning of cable installation, and adherence to clearly marked cable corridors. Consequently, cumulative displacement effects remain **low** for all fleets.

21.13.3.23 Tier 3: No additional projects have been identified at Tier 3. Accordingly, there are no further developments that would alter or elevate the level of effect beyond that determined under Tier 2.

Sensitivity

21.13.3.24 The sensitivity is assessed for Offshore Project alone effects, summarised as high for local potting <12m vessels, high for set nets, high for commercial diving for shellfish, medium for potting by 12 m and over vessels and vessels targeting nephrops, handline for mackerel; and low for all other fisheries.

Significance of cumulative effect

21.13.3.25 All fisheries: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptors ranges from low to high. The effect will therefore be of **minor adverse** significance, which is **Not Significant** in EIA terms.

Displacement or disruption of commercially important fish and shellfish resources

Magnitude

21.13.3.26 Tier 1: The cumulative effects for fish and shellfish ecology have been assessed in **Chapter 11, Volume 2a** and **Chapter 12, Volume 2a**, covering the following effects during the construction phase:

- Cumulative mortality, injury and behavioural changes resulting from UWN;
- Cumulative temporary increases in SSC and sediment deposition.

21.13.3.27 The underwater noise effects on fish and shellfish receptors are predicted to be of negligible to minor adverse residual significance. Temporary increases in suspended sediment and sediment deposition may occur due to the installation of infrastructure are predicted to be of negligible to minor adverse residual significance.

21.13.3.28 Overall, cumulative effects on fish and shellfish ecology during construction are assessed to be of negligible to minor adverse residual significance. Therefore, the magnitude of effect to Commercial Fisheries resources is assessed as low adverse for all commercial fishery fleets.

21.13.3.29 Tier 2: The Tier 2 projects are not considered to raise the magnitude of impact beyond what is assessed for Tier 1, summarised as low for all commercial fishing fleets. This is due to any effects being highly localised to specific projects and not considered to result in any effect detectable at species stock levels.

21.13.3.30 Tier 3: No additional projects have been identified at Tier 3. Accordingly, there are no further developments that would alter or elevate the level of effect beyond that determined under Tier 2.

Sensitivity

21.13.3.31 All commercial fishing fleets are sensitive to displacement of their target resource.

21.13.3.32 All commercial fishing fleets are deemed to be of high vulnerability, medium recoverability and medium-high value. The sensitivity of the receptor is therefore, considered to be medium.

Significance of cumulative effect

21.13.3.33 All fisheries: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptors is medium. The effect will therefore be of **minor adverse** significance, which is **Not Significant** in EIA terms.

21.13.4 OPERATION AND MAINTENANCE

Reduction in Access to, or Exclusion from Established Fishing Grounds

21.13.4.1 Over time, commercial fishing fleets are expected to adjust to the presence of offshore wind infrastructure and, for certain gears, potentially adapt to operate in proximity to array areas. During the O&M phase, the nature of impacts is expected to be similar to those experienced during construction; however, with reduced spatial and temporal disturbance, the overall magnitude of effect is lower. As such, across all assessed tiers, including floating offshore wind projects and relevant MPAs, impacts during O&M are assessed as **minor adverse** significance for all fleets, with no escalation beyond the levels identified for construction, which is **Not Significant** in EIA terms.

Displacement leading to gear conflict and increased fishing pressure on adjacent grounds

21.13.4.2 Over time, commercial fishing fleets are expected to adjust to the presence of offshore wind infrastructure, with displacement effects stabilising as patterns of coexistence become established. Although floating offshore wind projects and proposed MPA management measures included within Tiers 1, 2 and 3 may contribute to wider spatial pressures, the ability of potting fleets to resume activity across cumulative project cable corridors reduces the potential for sustained displacement or long-term competition for grounds. Mobile gear sectors are not affected by project-alone effects, and no additional constraints are anticipated during the O&M phase. Accordingly, the effects of O&M are assessed as **minor adverse** significance for all fleets, which is **Not Significant** in EIA terms.

Displacement or disruption of commercially important fish and shellfish resources

Magnitude

21.13.4.3 Tier 1: The cumulative effects for fish and shellfish ecology have been assessed in **Chapter 11, Volume 2a** and **Chapter 12, Volume 2a**, covering the following effects during the construction phase:

- Long-term habitat loss.

21.13.4.4 The assessment on effects of long-term habitat loss highlights that while habitat loss may be locally significant and comprise a permanent change in seabed habitat within the footprint of the structures and scour and cable protection, the footprint of the area affected will be highly localised. Furthermore, the seabed habitats that would be affected are common and widespread in the region.

21.13.4.5 Overall cumulative effects on fish and shellfish ecology during O&M are assessed to be of minor adverse significance. Therefore, the magnitude of effect to Commercial Fisheries resources is assessed as low adverse for all commercial fishery fleets.

21.13.4.6 Tier 2 and Tier 3: The Tier 2 and Tier 3 projects are not considered to raise the magnitude of impact beyond what is assessed for Tier 1, summarised as low for all commercial fishing fleets. This is due to any effects being highly localised to specific projects and not considered to result in any effect detectable at species stock levels.

Sensitivity

21.13.4.7 All commercial fishing fleets are sensitive to displacement of their target resource.

21.13.4.8 All commercial fishing fleets are deemed to be of high vulnerability, medium recoverability and medium-high value. The sensitivity of the receptor is therefore, considered to be medium.

Significance of cumulative effect

21.13.4.9 All fisheries: the magnitude of the impact is deemed to be low adverse, and the sensitivity of the receptors is medium. The effect will therefore be of **minor adverse** significance, which is **Not Significant** in EIA terms.

21.13.5 DECOMMISSIONING

21.13.5.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction for all cumulative effects.

21.13.5.2 A summary of the CEA for Commercial Fisheries is set out in **Table 21-32.**

Table 21-32: Cumulative effects assessment for Commercial Fisheries

CEA	Receptor	Sensitivity	Magnitude	Significance of effect	Mitigation	Residual significance
Construction						
Reduction in access to, or exclusion from established fishing grounds within the Array Area	Potting <12 m for lobster, brown crab, ballan wrasse	High	Low	Minor (Not Significant)	None beyond Project FMMCP (M026)	Minor (Not Significant)
	Potting >12 m for lobster, brown crab, ballan wrasse	Medium	Low	Minor (Not Significant)		
	Potting for nephrops	Medium	Low	Minor (Not Significant)		
	Demersal trawl fishery for monkfish, haddock,	Low	Low	Minor (Not Significant)		
	Demersal trawl fishery for nephrops	Low	Low	Minor (Not Significant)		
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low	Minor (Not Significant)		
	Handline targeting mackerel (and occasional blue fin tuna)	Medium	Low	Minor (Not Significant)		
	Dredge for scallop	Low	Low	Minor (Not Significant)		
	Set nets for white fish and rays	High	Low	Minor (Not Significant)		
	Commercial diving for shellfish	High	Low	Minor (Not Significant)		
	All other gears and fisheries	Medium	Low	Minor (Not Significant)		

CEA	Receptor	Sensitivity	Magnitude	Significance of effect	Mitigation	Residual significance
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	Potting <12 m for lobster, brown crab, ballan wrasse etc	High	Low	Minor (Not Significant)	None beyond Project FMMCP (M026)	Minor (Not Significant)
	Potting >12 m for lobster, brown crab, ballan wrasse etc	Medium	Low	Minor (Not Significant)		
	Potting for nephrops	Medium	Low	Minor (Not Significant)		
	Demersal trawl fishery for monkfish, haddock,	Low	Low	Minor (Not Significant)		
	Demersal trawl fishery for nephrops	Low	Low	Minor (Not Significant)		
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low	Minor (Not Significant)		
	Handline targeting mackerel (and occasional blue fin tuna)	Medium	Low	Minor (Not Significant)		
	Dredge for scallop	Low	Low	Minor (Not Significant)		
	Set nets for white fish and rays	High	Low	Minor (Not Significant)		
	Commercial diving for shellfish	High	Low	Minor (Not Significant)		
	All other gears and fisheries	Medium	Low	Minor (Not Significant)		
Displacement or disruption of	Potting <12 m for lobster, brown crab, ballan wrasse etc	Medium	Low	Minor (Not Significant)	None beyond	Minor (Not Significant)

CEA	Receptor	Sensitivity	Magnitude	Significance of effect	Mitigation	Residual significance
commercially important fish and shellfish resources	Potting >12 m for lobster, brown crab, ballan wrasse etc	Medium	Low	Minor (Not Significant)	Project FMMCP (M026)	
	Potting for nephrops	Medium	Low	Minor (Not Significant)		
	Demersal trawl fishery for monkfish, haddock,	Medium	Low	Minor (Not Significant)		
	Demersal trawl fishery for nephrops	Medium	Low	Minor (Not Significant)		
	Pelagic trawl targeting mackerel, herring and horse mackerel	Medium	Low	Minor (Not Significant)		
	Handline targeting mackerel (and occasional blue fin tuna)	Medium	Low	Minor (Not Significant)		
	Dredge for scallop	Medium	Low	Minor (Not Significant)		
	Set nets for white fish and rays	Medium	Low	Minor (Not Significant)		
	Commercial diving for shellfish	Medium	Low	Minor (Not Significant)		
	All other gears and fisheries	Medium	Low	Minor (Not Significant)		
O&M						
Reduction in access to, or exclusion from	Potting <12 m for lobster, brown crab, ballan wrasse etc	High	Low	Minor (Not Significant)	None beyond	Minor (Not Significant)

CEA	Receptor	Sensitivity	Magnitude	Significance of effect	Mitigation	Residual significance
established fishing grounds within the Array Area	Potting >12 m for lobster, brown crab, ballan wrasse etc	Medium	Low	Minor (Not Significant)	Project FMMCP (M026)	
	Potting for nephrops	Medium	Low	Minor (Not Significant)		
	Demersal trawl fishery for monkfish, haddock,	Low	Low	Minor (Not Significant)		
	Demersal trawl fishery for nephrops	Low	Low	Minor (Not Significant)		
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low	Minor (Not Significant)		
	Handline targeting mackerel (and occasional blue fin tuna)	Medium	Low	Minor (Not Significant)		
	Dredge for scallop	Low	Low	Minor (Not Significant)		
	Set nets for white fish and rays	High	Low	Minor (Not Significant)		
	Commercial diving for shellfish	High	Low	Minor (Not Significant)		
	All other gears and fisheries	Medium	Low	Minor (Not Significant)		
Displacement leading to gear conflict and increased fishing	Potting <12 m for lobster, brown crab, ballan wrasse etc	High	Low	Minor (Not Significant)	None beyond Project	Minor (Not Significant)
	Potting >12 m for lobster, brown crab, ballan wrasse etc	Medium	Low	Minor (Not Significant)		

CEA	Receptor	Sensitivity	Magnitude	Significance of effect	Mitigation	Residual significance
pressure on adjacent grounds	Potting for nephrops	Medium	Low	Minor (Not Significant)	FMMCP (M026)	
	Demersal trawl fishery for monkfish, haddock,	Low	Low	Minor (Not Significant)		
	Demersal trawl fishery for nephrops	Low	Low	Minor (Not Significant)		
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low	Minor (Not Significant)		
	Handline targeting mackerel (and occasional blue fin tuna)	Medium	Low	Minor (Not Significant)		
	Dredge for scallop	Low	Low	Minor (Not Significant)		
	Set nets for white fish and rays	High	Low	Minor (Not Significant)		
	Commercial diving for shellfish	High	Low	Minor (Not Significant)		
	All other gears and fisheries	Medium	Low	Minor (Not Significant)		
Displacement or disruption of commercially important fish and shellfish resources	Potting <12 m for lobster, brown crab, ballan wrasse etc	Medium	Low	Minor (Not Significant)	None beyond Project FMMCP (M026)	Minor (Not Significant)
	Potting >12 m for lobster, brown crab, ballan wrasse etc	Medium	Low	Minor (Not Significant)		
	Potting for nephrops	Medium	Low	Minor (Not Significant)		

CEA	Receptor	Sensitivity	Magnitude	Significance of effect	Mitigation	Residual significance
	Demersal trawl fishery for monkfish, haddock,	Medium	Low	Minor (Not Significant)		
	Demersal trawl fishery for nephrops	Medium	Low	Minor (Not Significant)		
	Pelagic trawl targeting mackerel, herring and horse mackerel	Medium	Low	Minor (Not Significant)		
	Handline targeting mackerel (and occasional blue fin tuna)	Medium	Low	Minor (Not Significant)		
	Dredge for scallop	Medium	Low	Minor (Not Significant)		
	Set nets for white fish and rays	Medium	Low	Minor (Not Significant)		
	Commercial diving for shellfish	Medium	Low	Minor (Not Significant)		
	All other gears and fisheries	Medium	Low	Minor (Not Significant)		
Decommissioning						
As per construction assessment						

This page has intentionally been left blank

21.14 TRANSBOUNDARY EFFECTS

21.14.1.1 Transboundary effects occur when a development in one European Economic Area (EEA) State impacts the environment of another EEA State(s). A screening of potential transboundary effects was undertaken within the **Scoping Report**.

21.14.1.2 A transboundary effect assessment assesses the potential Commercial Fisheries effects from the Offshore Project upon the interests of European Economic Areas (EEA States).

21.14.1.3 A screening of transboundary impacts has been carried out, which identified that there was the potential for transboundary effects to occur in relation to Commercial Fisheries. The potential transboundary impacts screened into the assessment for Commercial Fisheries are:

- Effects on commercial fishing fleets as a result of impacts from the Offshore Project on commercial fish stocks in the waters of EEA States;
- Effects on commercial fishing fleets from all EEA countries as a result of constraints on foreign commercial fishing activities operating in the Offshore Project, including pelagic trawling, and other gears. These effects may include reduction in access to fishing grounds and potential displacement of fishing effort from the Array Area to alternative fishing grounds in EEA States, which will have direct implications to that fishing ground.

21.14.1.4 Effects on biological resources could occur over a range of 10s to 100s of kilometres from the Offshore Project and could therefore interact with the following EEA states: Ireland. Based on the minor to negligible residual significance of disruption to commercial species during all phases of the Offshore Project, it is expected that the impact on stocks in the Irish EEZ will be negligible. Therefore, the potential transboundary impact of effects on commercial fish stocks in the waters of other EEA States on commercial fisheries is concluded to be **Not Significant** in EIA terms.

21.14.1.5 Effects on commercial fishing fleets could occur over a range of 100s of kilometres from the Array Area (affecting fleets from other states that operate in the vicinity of the Array Area) and could therefore interact with the following EEA states: Ireland, Spain, Belgium, the Netherlands, Germany, France, Denmark, and Norway. Effects on these foreign commercial fishing fleets from EEA states, in terms of reduction in access to fishing grounds and displacement into alternative grounds including other EEZs, have therefore been intrinsically considered throughout the Commercial Fisheries EIA process and are consistent to those presented in the impact assessment and CEA. Therefore, the potential transboundary impact of effects on non-UK commercial fishing fleets in the waters of other EEA States on commercial fisheries is concluded to be **Not Significant** in EIA terms.

21.15 SUMMARY OF RESIDUAL EFFECTS

21.15.1.1 **Table 21-33** presents a summary of the assessment of significant impacts, any relevant mitigation measures, and residual effects on Commercial Fisheries receptors.

Table 21-33 Summary of residual effects

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
Construction							
Reduction in access to, or exclusion from established fishing grounds within the Array Area	Potting <12m for lobster, brown crab, ballan wrasse etc	Medium	High	M026 (FMMCP), M027 (CFWG), M028 (liaison roles), M013 (safety zones), M029 (Marine Coordination Centre), M032 (layout info sharing), M036 (Turbine Area)	**Moderate Adverse (Potentially Significant)**	A001, A002, A003	Minor Adverse (Not Significant)
	Potting >12m for lobster, brown crab, ballan wrasse etc	Medium	Medium		**Moderate Adverse (Potentially Significant)**	A001, A002, A003	Minor Adverse (Not Significant)
	Potting for nephrops	Negligible	Medium		Negligible (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Negligible	Low		Negligible (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Medium	High		**Moderate Adverse (Potentially Significant)**	A001, A002, A003	Minor Adverse (Not Significant)
	Commercial diving for shellfish	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Reduction in access to, or exclusion from established fishing grounds within the OCC AoS	Potting <12m for lobster, brown crab, ballan wrasse etc	Medium	High	M026, M027, M028, M029, M030 (survey coord/info sharing),M010 (ERCoP & guard vessels), M032	**Moderate Adverse (Potentially Significant)**	A002, A003	Minor Adverse (Not Significant)
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Negligible	Medium		Negligible (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Negligible	Low		Negligible (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Medium	Medium		**Moderate Adverse (Potentially Significant)**	A002, A003	Minor Adverse (Not Significant)
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Medium	High		**Moderate Adverse (Potentially Significant)**	A002, A003	Minor Adverse (Not Significant)

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
	Commercial diving for shellfish	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	Potting <12m for lobster, brown crab, ballan wrasse etc	Medium	High	M026, M027, M002, M019 (boulder/obstruction info), M038 (gear interaction procedures), M021	**Moderate Adverse (Potentially Significant)**	A001, A002, A003	Minor Adverse (Not Significant)
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Displacement or disruption of commercially important fish and shellfish resources	Potting <12m for lobster, brown crab, ballan wrasse etc	Medium	Medium	M002 (Cable Installation Plan), M004 (object retrieval), M006 (INNS Plan), M026 (FMMCP), M019 (EMP), M021 (pollution prevention), M021(MARPOL compliance)	Minor Adverse (Not Significant)	Monitoring & update to FMMCP if necessary	Minor Adverse (Not Significant)
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
	Set nets for white fish and rays	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	Medium	M010 (ERCoP, SAR, guard vessels), M029 (Marine Coordination Centre), M022 (NSVMP), M028 (liaison roles), M026, M027, M037 (local vessels)	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Additional steaming to alternative fishing grounds - all other fleets	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	Medium	M026, M027, M032 (layout & routing information), M038 (gear interaction), M029, M037	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
	Set nets for white fish and rays	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Physical presence of infrastructure leading to gear snagging	Potting <12m for lobster, brown crab, ballan wrasse etc	Medium	Medium	M030 (cable burial & coordination), M032, M038 (gear interaction), M033 (Lighting & Marking Plan), M014 (marking & lighting of Array), M011, M012 (charting & NtMs), M013 (safety zones)	**Moderate Adverse (Potentially Significant)**	A001, A002, A003	Minor Adverse (Not Significant)
	Potting >12m for lobster, brown crab, ballan wrasse etc	Medium	Medium		**Moderate Adverse (Potentially Significant)**	A001, A002, A003	Minor Adverse (Not Significant)
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Medium	Medium		**Moderate Adverse (Potentially Significant)**	A001, A002, A003	Minor Adverse (Not Significant)
	Commercial diving for shellfish	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
Operation and Maintenance							
Reduction in access to, or exclusion from established fishing grounds within the Array Area	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	High	M026, M027, M028, M013, M029, M032, M036	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Negligible	Medium		Negligible (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Negligible	Low		Negligible (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Reduction in access to, or exclusion from established fishing grounds within the OCC AoS	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	High	M026, M027, M002, M028, M029, M030, M010, M032	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Negligible	Medium		Negligible (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Negligible	Low		Negligible (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	High	M026, M027, M028, M032, M030	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Displacement or disruption of commercially important fish and shellfish resources	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	High	M002, M019, M004, M006, M026, M019, M021	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	High		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	Medium	M010, M029, M022, M028, M026, M027, M037	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Low		Minor Adverse (Not Significant)	N/A	N/A

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Additional steaming to alternative fishing grounds - all other fleets	Potting <12m for lobster, brown crab, ballan wrasse etc	Low	Medium	M026, M027, M032, M038, M029, M037	Minor Adverse (Not Significant)	N/A	N/A
	Potting >12m for lobster, brown crab, ballan wrasse etc	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Potting for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Dredge for scallop	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Commercial diving for shellfish	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
Physical presence of infrastructure leading to gear snagging	Potting <12m for lobster, brown crab, ballan wrasse etc	Medium	Medium	M030 (cable burial & coordination), M032, M038 (gear interaction), M033 (Lighting & Marking Plan), M014 (marking & lighting of Array), M011, M012 (charting & NtMs), M013 (safety zones)	**Moderate Adverse (Potentially Significant)**	A001, A002	Minor Adverse (Not Significant)
	Potting >12m for lobster, brown crab, ballan wrasse etc	Medium	Medium		**Moderate Adverse (Potentially Significant)**	A001, A002	Minor Adverse (Not Significant)
	Potting for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for monkfish, haddock,	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Demersal trawl fishery for nephrops	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Pelagic trawl targeting mackerel, herring and horse mackerel	Low	Low		Minor Adverse (Not Significant)	N/A	N/A
	Handline targeting mackerel (and occasional blue fin tuna)	Low	Low		Minor Adverse (Not Significant)	N/A	N/A

Activity and Impact	Receptor	Magnitude of Impact	Sensitivity	Embedded mitigation measures	Significance of effect (significance)	Further Environmental Mitigation	Assessment of Residual Effect (Significance)
	Dredge for scallop	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	Set nets for white fish and rays	Low	Medium		**Moderate Adverse (Potentially Significant)**	A001, A002	Minor Adverse (Not Significant)
	Commercial diving for shellfish	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
	All other gears and fisheries	Low	Medium		Minor Adverse (Not Significant)	N/A	N/A
Decommissioning							
As per construction assessment							

21.16 GLOSSARY OF TERMS AND ABBREVIATIONS

21.16.1.1 A list of key terms and acronyms used in this chapter are provided in **Table 21-34** and **Table 21-35**.

Table 21-34 Acronyms and abbreviations

Term	Definition
AIS	Automatic Identification System
AoS	Area of Search
CBRA	Cable Burial Risk Assessment
Cefas	Centre for Environment Fisheries and Aquaculture Science
CFLO	Company Fisheries Liaison Officer
CEA	Cumulative Effects Assessment
CnES	Comhairle nan Eilean Siar
COLREGs	International Regulations for Preventing Collisions at Sea
DCF	Data Collection Framework
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMSA	European Maritime Safety Agency
ERCOP	Emergency Response Cooperation Plan
ESCA	European Subsea Cables Association
EU	European Union
FIR	Fishing Industry Representative
FiSMaDiM	Fishing industry Sensitivity Mapping and Displacement Modelling
FLO	Fisheries Liaison Officer
FLOWW	Fisheries Liaison with Offshore Wind and Wet Renewables group
FMMCP	Fisheries Mitigation, Monitoring and Communication Plan
FMMS	Fisheries Management and Mitigation Strategy
HDD	Horizontal Directional Drilling
IALA	International Association of Lighthouse Authorities
ICES	International Council for the Exploration of the Sea
INNS	Invasive and Non-Native Species
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate - Licensing Operations Team
MD-SEDD	Marine Directorate - Science, Evidence, Digital and Data
MGN	Marine Guidance Note
MHWS	Mean High Water Springs
MMO	Marine Management Organisation
MPA	Marine Protected Areas

Term	Definition
MPS	Marine Policy Statement
nm	Nautical mile
NMP	National Marine Plan
NMPi	National Marine Plan interactive
NLB	Northern Lighthouse Board
NtMs	Notices to Mariners
O&M	Operations and Maintenance
OCAS	Offshore Cable Area of Search
OFA	Orkney Fisheries Association
OFLO	Offshore Fisheries Liaison Officer
OWF	Offshore Wind Farm
PAC	Preliminary Application Consultation
RAM	Restricted in their Ability to Manoeuvre
RIFG	Regional Inshore Fisheries Group
SAR	Swept Area Ratio
SFF	Scottish Fishermen's Federation
SMP	Sectoral Marine Plan
SOLAS	Safety of Life at Sea
SPFA	Scottish Pelagic Fishermen's Association
SWFPA	Scottish White Fish Producers Association
TAC	Total Allowable Catch
TCA	Trade and Cooperation Agreement
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
UKHO	United Kingdom Hydrographic Office
NSVMP	Navigation and Safety Vessel Management Plan
VMS	Vessel Monitoring System
WTG	Wind Turbine Generator
WIFA	Western Isles Fisherman's Association
ZOI	Zone of Influence

Table 21-35 Glossary

Term	Meaning
the Applicant	Spiorad na Mara Limited (the Project owner).
Array Area	The offshore area within which the offshore wind turbine generators (WTGs), associated foundations, Offshore Cables, and Offshore Substation Platform (OSP) (if required), will be located. This area encompasses the Turbine Area that will contain all above water surface infrastructure (WTGs/OSP) and an additional area within which further below water infrastructure (foundations and cables) may also be located.

Term	Meaning
Array Cables	The offshore electrical and communication cables that connect infrastructure located within the Array Area, for: • Scenario 1: Array Cables will be used to connect Wind Turbine Generators (WTGs) to each other, and to connect WTGs to the OSP • Scenario 2: Array Cables will be used to connect WTGs to each other.
Array Cables to Landfall	The offshore electrical and communication cables located in the Array Area and Offshore Cables Area of Search that connect the wind turbine generators (WTGs) directly to Landfall for Scenario 2.
Combined Effects	Combined effect of the individual development on one particular receptor; for example noise, dust, and visual. This includes Project-Lifetime Effects and Receptor-Led Effects.
Cumulative Effects	Considers the likely significant effects of multiple impacts and activities from several developments.
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Environmental Impact Assessment Report (EIAR)	The Environmental Impact Assessment Report (EIAR) prepared to assess the likely significant effects of the Project on the environment.
Export Cables	The offshore electrical and communication cables located in the Array Area and Offshore Cables Area of Search that connect the Offshore Substation Platform (OSP) (if required) to Landfall for Scenario 1.
Embedded or 'Designed-in' Mitigation	Mitigation measures to avoid or reduce environmental effects that are directly incorporated into the preferred design for the Project. This can include standard practice in accordance with or without guidance. Embedded Mitigation is considered as part of the impact assessment, before effect significance is identified.
Demersal	Living on or near the seabed.
Demersal seine	An encircling net shot in the open sea using very long ropes to lay out the net, and ropes on the seabed prior to towing the net closed and hauling from a boat under its own power.
Fish stock	Any natural population of fish which are an isolated and self-perpetuating group of the same species.
Fishery	A group of vessel voyages which target the same species or use the same gear.
Fishing ground	An area of water or seabed targeted by fishing activity.
Fleet	A physical group of vessels sharing similar characteristics (e.g. nationality).
Gear type	The method/equipment used for fishing.

Term	Meaning
Impact	Change that is caused by an action; for example, foundation installation (action) during construction which results in habitat loss (impact).
International Council for the Exploration of the Seas (ICES) statistical rectangles	ICES standardise the division of sea areas to enable statistical analysis of data. Each ICES statistical rectangle is '30 min latitude by 1 degree longitude' in size (approximately 30 x 30 nautical miles). A number of rectangles are amalgamated to create ICES statistical areas.
Landings	Quantitative description of the amount of fish returned to port for sale, in terms of value or weight.
Offshore Cables	Electrical and communication cables located within the Array Area and Offshore Cable Area of Search. The Offshore Cables consist of Array Cables, Array Cables to Landfall, and Export Cables.
Offshore Cable Area of Search (OCAS)	The area within which the offshore electrical and communication cables between the Array Area and Landfall up to Mean High Water Springs (MHWS) will be located.
Offshore Project	The components of the Spiorad na Mara offshore wind farm (the Project) located seaward of Mean High Water Springs (MHWS).
Offshore Project Boundary	The 'red line boundary' encompassing the Offshore Project.
Onshore Transmission Works (OTW) / Onshore Project	The components of the Spiorad na Mara offshore wind farm (the Project) located landward of Mean Low Water Springs (MLWS).
Otter trawl	A net with large rectangular boards (otter boards) attached to the towing cables which are used to keep the mouth of the trawl net open. Otter boards are made of timber or steel and are positioned in such a way that the hydrodynamic forces, acting on them when the net is towed along the seabed, pushes them outwards and prevents the mouth of the net from closing.
Pelagic	Of or relating to the open sea.
Pelagic trawl	A net used to target fish species in the mid water column.
Project	The Spiorad na Mara offshore wind farm development. This term describes the whole development, including all offshore and onshore components.
Project Boundary	The 'red line boundary' encompassing all offshore and onshore components of the Project.
Scallop dredge	A method to catch scallop using steel dredges with a leading bar fitted with a set of spring loaded, downward pointing teeth. Behind this toothed bar (sword), a mat of steel rings is fitted. A heavy net cover (back) is laced to the frame, sides and after end of the mat to form a bag.
Scoping Opinion	A report presenting the written opinion of the Scottish Ministers, with input from Comhairle nan Eilean Siar (CnES) for the OTW, as to the scope and level of detail of information to be provided in the Environmental Impact Assessment (EIA) for the Project.

Term	Meaning
Stock assessment	An assessment of the biological stock of a species and its status in relation to defined references points for biomass and fishing mortality.
Swept Area Ratio (SAR)	Swept Area Ratio (SAR) (derived from Vessel Monitoring System (VMS) data) indicates the number of times in an annual period that a fishing gear makes contact with (or sweeps) the seabed surface. Surface SAR provides a proxy for fishing intensity.
Turbine Area	A reduced area within the Array Area where above water surface infrastructure would be located i.e. wind turbine generators (WTG) and Offshore Substation Platform (OSP) (if required). This area has been developed and refined through stakeholder engagement and environmental assessment.
Vessel Monitoring System (VMS)	A system, required by law, used in commercial fishing to allow environmental and fisheries regulatory organisations to monitor, minimally, the position, time at a position, and course and speed of fishing vessels which are 12 m and over in length.
Wind Turbine Generator (WTG)	The wind turbines that generate electricity consisting of tubular towers and blades attached to a nacelle housing mechanical and electrical generating equipment

21.17 REFERENCES

ABPmer (2022) 'Spatial Squeeze in Fisheries'. Available online at: https://www.nffo.org.uk/the-frightening-outlook-of-fisheries-displacement-spatial-squeeze-report-published/ (Accessed February 2026).

Blyth-Skyrme, R.E. (2010a). Options and opportunities for marine fisheries mitigation associated with wind farms. Final report for Collaborative Offshore Wind Research into the Environment contract FISHMITIG09. COWRIE (Collaborative Offshore Wind Research Into the Environment) Ltd, London. 125 pp. Available online at: https://tethys.pnnl.gov/publications/options-opportunities-marine-fisheries-mitigation-associated-windfarms (Accessed February 2026).

Blyth-Skyrme, R.E. (2010b). Options and opportunities for marine fisheries mitigation associated with wind farms: Summary report for COWRIE contract FISHMITIG09. COWRIE Ltd, c/o Nature Bureau, Newbury, UK. 8pp. Available online at: https://tethys.pnnl.gov/publications/options-opportunities-marine-fisheries-mitigation-associated-windfarms (Accessed February 2026).

Centre for Environment, Fisheries and Aquaculture Science (Cefas) (2012). Guidelines for data acquisition to support marine environmental assessments of offshore renewable energy projects. Contract report: ME5403. Available online at: https://tethys.pnnl.gov/publications/guidelines-data-acquisition-support-marine-environmental-assessments-offshore (Accessed February 2026).

Coates, D. A., Deschutter, Y., Vincx, M., & Vanaverbeke, J. (2014). Enrichment and aggregation of epifauna around offshore wind farm foundations: Role of sediment type and structure. Marine Environmental Research, 95, 1–12. Available online: https://doi.org/10.1016/j.marenvres.2013.12.008 (Accessed February 2026).

European Maritime Safety Agency (EMSA) (2023). Integrated Maritime Services Automatic identification system (AIS) data for EU fishing vessels from 2019 to 2022 indicating route density per km per annual period. Available online: https://www.emsa.europa.eu/combined-maritime-data-menu/data-sources.html (Accessed February 2026).

European Subsea Cable Association (ESCA) (2018). European Subsea Cable Association Statement on vessels operating in the vicinity of subsea cables. Available online at: https://www.escaeu.org/documents/ (Accessed February 2026).

European Union Data Collection Framework (EU DCF) (2022). Data by quarter-rectangle: Tables and maps of effort and landings by ICES statistical rectangles for 2012 to 2016. Available online at: https://www.eea.europa.eu/data-and-maps/data/external/ices-statistical-rectangles (Accessed February 2026).

Fisheries Liaison with Offshore Wind and Wet Renewables group (FLOWW) (2014). FLOWW Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison. January 2014. Available online at: https://repository.oceanbestpractices.org/bitstream/handle/11329/1454/FLOWW-Best-Practice-Guidance-for-Offshore-Renewables-Developments-Jan-2014.pdf?sequence=1 (Accessed February 2026).

Fisheries Liaison with Offshore Wind and Wet Renewables group (FLOWW) (2015). FLOWW Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Disruption Settlements and Community Funds. Available online at: https://www.thecrownestate.co.uk/media/1776/floww-best-practice-guidance-disruption-settlements-and-community-funds.pdf (Accessed February 2026).

HM Government (2011). UK Marine Policy Statement. Available online at: https://www.gov.uk/government/publications/uk-marine-policy-statement (Accessed February 2026).

ICES (2022). Spatial data layers of fishing intensity/pressure for EU vessels operating within ICES defined Celtic Seas Ecoregion and Greater North Sea Ecoregion.

International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA). (2021). Guideline G1162. Available online at: https://www.iala-aism.org/product-category/publications/guidelines/. (Accessed February 2026).

International Cable Protection Committee, (2009). Fishing and Submarine Cables - Working Together. Available online at: https://iscpc.org/documents/?id=142 (Accessed February 2026).

International Maritime Organization (IMO) (1974a). International Regulations for Preventing Collisions at Sea (COLREGs). Available online at: https://www.imo.org/en/OurWork/Safety/Pages/Preventing-Collisions.aspx (Accessed February 2026).

Krone, R., Dederer, G., Kanstinger, P., Krämer, K., Schneider, C., & Jennerjahn, T. (2013). A habitat for mussels: Epibenthic communities on offshore wind farm structures. Helgoland Marine Research, 67, 701–710. Available online at: https://doi.org/10.1007/s10152-013-0350-1 (Accessed February 2026).

Marine Directorate (2025). National Marine Plan interactive (NMPi). Available online at: https://marinescotland.atkinsgeospatial.com/nmpi/ (Accessed February 2026).

Marine Management Organisation (MMO) (2022a). UK sea fisheries annual statistics report 2021. Available online at: https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021 (Accessed February 2026).

Marine Management Organisation (MMO) (2022b). Vessel Monitoring System data for non-UK registered vessels for 2016 to 2020 indicating hours fishing for mobile and static vessels to a resolution of 200th of an ICES rectangle.

Marine Management Organisation (MMO) (2024). UK sea fisheries annual statistics report 2022. Available online at: https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2023 (Accessed February 2026).

Marine Scotland (2020). Guidance on preparing a Fisheries Management and Mitigation Strategy ("FMMS"), DRAFT. Available online at: https://marine.gov.scot/data/fisheries-management-and-mitigation-strategy-fmms-guidance-document (Accessed November 2024; now redacted).

Maritime and Coastguard Agency (MCA). (2021). Guideline MGN661. Available online at: https://www.gov.uk/government/publications/mgn-661-mf-navigation-safe-and-responsible-anchoring-

and-fishing-practices/mgn-661-mf-navigation-safe-and-responsible-anchoring-and-fishing-practices (Accessed February 2026).

MMO (2024) 'Marine Protected Areas Bottom Towed Fishing Gear Byelaw 2023'. Available online at: https://www.gov.uk/government/publications/marine-protected-areas-bottom-towed-fishing-gear-byelaw-2023 (Accessed February 2026).

Offshore Energies UK (2023). Guidelines for liaison with the fishing industry on the UKCS – Issue 8. Available online at: https://oeuk.org.uk/product/guidelines-for-liaison-with-the-fishing-industry-on-the-ucks-issue-8/ (Accessed February 2026).

Roach, M., Cohen, M., Forster, R., Revill, A. S. and Johnson, M. (2018). The effects of temporary exclusion of activity due to wind farm construction on a lobster (*Homarus gammarus*) fishery suggests a potential management approach. Available online at: https://academic.oup.com/icesjms/article/75/4/1416/4841920?login=false (Accessed February 2026).

Scottish Government (2015). Scotland's National Marine Plan. Available online at: https://www.gov.scot/publications/scotlands-national-marine-plan/ (Accessed February 2026).

Scottish Government (2020). Sectoral Marine Plan for Offshore Wind Energy. Available online at: https://www.gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/ (Accessed February 2026).

Scottish Government (2022). Good Practice Guidance for assessing fisheries displacement by other licensed marine activities. Available online at: https://www.gov.scot/publications/good-practice-guidance-assessing-fisheries-displacement-licensed-marine-activities/pages/8/ (Accessed February 2026).

Spiorad na Mara Limited, 2023. Scoping Report: Spiorad na Mara Offshore Windfarm. [online] Marine Scotland. Available at: https://marine.gov.scot/?q=node/24540 (Accessed February 2026).

Thatcher, H., Stamp, T., Wilcockson, D., & Moore, P. J. (2023). Residency and habitat use of European lobster (Homarus gammarus) within an offshore wind farm. ICES Journal of Marine Science, 80(5), 1410–1421. Available online at: https://doi.org/10.1093/icesjms/fsad067 (Accessed February 2026).

The Kingfisher Information Service – Offshore Renewable & Cable Awareness (KIS-ORCA). (2019). Available online at: https://kis-orca.org/ (Accessed February 2026).

UK Fisheries Economic Network and Seafish (2012). Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments. Available online at: https://www.seafish.org/document/?id=AA0CB236-1E2A-4D2A-9F86-49CEB2B6DD5E (Accessed February 2026).

UKHO (2004) 'ADMIRALTY Mariner's Handbook (NP100)'. Available online at: https://www.admiralty.co.uk/publications/publications-and-reference-guides/admiralty-mariners-handbook (Accessed February 2026).

Xodus (2022). Good Practice Guidance for Assessing Fisheries Displacement. Available online at: https://tethys.pnnl.gov/publications/good-practice-guidance-assessing-fisheries-displacement-other-licensed-marine (Accessed February 2026).