MachairWind Offshore Windfarm

Chapter 12 Commercial Fisheries

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GLOSSARY OF ACRONYMS

Term	Definition
AIS	Automatic Identification System
CEA	Cumulative Effects Assessment
CES	Crown Estate Scotland
CFA	Clyde Fishermen's Association
CIFA	Communities Inshore Fisheries Alliance
COLREGs	Convention on the International Regulations for Preventing Collisions at Sea
COWRIE	Collaborative Offshore Wind Research into the Environment
DDV	Drop-down video
ECC	Export Cable Corridor
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EIA Regulations	Environmental Impact Assessment Regulations
EIAR	Environmental Impact Assessment Report
EMF	Electromagnetic field
EMODnet	European Marine Observation and Data Network
EMSA	European Maritime Safety Agency
ESCA	European Subsea Cable Association
EU	European Union
EU DCF	European Union Data Collection Framework
FiSMaDiM	Fisheries Sensitivity Mapping and Displacement Modelling
FLO	Fisheries Liaison Officer
FLOWW	Fisheries Liaison with Offshore Wind and Wet Renewables
FMMCP	Fisheries Mitigation, Monitoring and Communication Plan
FMMS	Fisheries Management and Mitigation Strategy
GVA	Gross Value Added
IACs	Inter-array cables
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
ICES	International Council for the Exploration of the Seas
IEA	International Energy Agency
IEMA	Institute of Environmental Management and Assessment
IMO	International Maritime Organization
INNSMP	Invasive Non-Native Species Management Plan

Term	Definition
INTOG	Innovation and Targeted Oil & Gas
JNCC	Joint Nature Conservation Committee
km	Kilometre
LMP	Lighting and Marking Plan
LSE	Likely Significant Effects
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate - Licensing and Operations Team
MD-SEDD	Marine Directorate – Science, Evidence, Data and Digital
MIFA	Mull and Iona Fishermen's Association
MNWFA	Mallaig & North-West Fishermen's Association
MMO	Marine Management Organisation
MPA	Marine Protected Area
MPCP	Marine Pollution Contingency Plan
MPS	Marine Policy Statement
MUs	Management Units
NIFF	Northern Ireland Fishermen's Federation
NLB	Northern Lighthouse Board
nm	Nautical mile
m	Metre
nm^2	Square nautical mile
NMP	National Marine Plan
NMP2	National Marine Plan 2
NMPi	National Marine Plan interactive
NSP	Navigational Safety Plan
O&M	Operation and Maintenance
OAA	Option Agreement Area
OFLO	Offshore Fisheries Liaison Officer
OnTDA	Onshore Transmission Development Area
OSP	Offshore Substation Platform
PAC	Pre-Application Consultation
EMP	Environmental Management Plan
RBS	Registration of Buyers and Sellers
RIFG	Regional Inshore Fisheries Group
SAC	Special Area of Conservation
SAR	Search and Rescue

Term	Definition
SCFF	Scottish Creel Fishermen's Federation
SFF	Scottish Fishermen's Federation
SMP	Sectoral Marine Plan
SOLAS	International Convention for the Safety of Life at Sea
SOV	Service Operation Vessel
SPFA	Scottish Pelagic Fishermen's Association
SWCRIFG	South West Coast Regional Inshore Fisheries Group
SWFPA	Scottish White Fish Producers Association
TCA	Trade and Cooperation Agreement
TR1	Trawl gear category (>=100 mm mesh)
TR2	Trawl gear category (70–99 mm mesh)
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
UXO	Unexploded ordnance
VMS	Vessel Monitoring System
VMNSP	Vessel Management and Navigational Safety Plan
WDA	Windfarm Development Area
WTG(s)	Wind turbine generator(s)

GLOSSARY OF TERMS

Term	Definition
Allision	The act of striking or collision of a moving vessel against a stationary object.
Bathymetry	Topography of the seabed.
Bedload	Sediment particles that travel near or on the seabed.
Breeding season	Furness (2015) defines breeding season as the period from modal return to the colony through to modal departure from the colony at the end of breeding, for birds at UK colonies.
Cable protection	Protective measure to minimise the effects of scour and hazards along the offshore cables (e.g. to prevent cable exposure or snagging of vessel anchors or fishing gear), as well as for protecting these cables at infrastructure crossing points.
Climate Change Impact	Climate Change Impact is defined as an impact from a climate hazard, such as asset damage or failure, which affects the ability of the receptor to maintain its function or purpose.
Climate Hazard	Climate Hazard is defined as a weather or climate-related event or trend in climate variable, such as storms or heatwaves, which has potential to do harm to receptors.
Climate Variable	Climate variable is defined as a measurable, monitorable aspect of the weather or climate such as temperature or wind speed.
Collision	The act or process of two moving objects colliding.
Combined Assessment	A whole-Project assessment considering interactions between the Windfarm Development Area, Offshore Export Cable Corridor and Onshore Transmission Development Area (i.e. considering impact interactions and additive effects to determine if any effects would be materially elevated from those assessed for the Windfarm Development Area-alone assessment). Due to long delays in securing confirmation of the Project's grid connection location, the level of detail available for the Offshore Export Cable Corridor and Onshore Transmission Development Area is limited and therefore the assessment is commensurate with the level of detail available at the time of carrying out the assessment. When it is time to progress the Offshore Export Cable Corridor and Onshore Transmission Development Area consent applications, their respective scoping and Environmental Impact Assessment Report / Environmental Report will take account of all likely effects predicted within the WDA EIA and present updated combined assessments using the latest available information covering all aspects of the Project.
Controlled airspace	Defined airspace within which pilots must follow Air Traffic Control instructions implicitly. In the UK, Classes A, C, D, and E are areas of controlled airspace.
Creel	Creel is a Scottish term for a pot or trap typically deployed by an inshore vessel. These are generally rigid structures which fish or shellfish are guided or enticed into through funnels that make entry easy but escape difficult. There are many designs which are created to suit the behaviour of its target species.
Cumulative Effects Assessment	Assessment of likely significant effects resulting from the incremental change caused by other past, present and reasonably foreseeable projects / activities together with the Project. This is separate to combined effects arising between the Project's separate Development Areas.
Demersal	Living on or near the seabed.
Development Area	Application boundary for consenting purposes which, for the Project, consists of a Windfarm Development Area, Offshore Export Cable Corridor, and Onshore Transmission Development Area. Separate consent and marine licence applications will be submitted for each Development Area where applicable.

Term	Definition
Embedded mitigation measure	Mitigation measures, including industry good practice measures, that are directly incorporated into the design for the MachairWind Windfarm Development Area to avoid or reduce environmental effects.
Environmental DNA (eDNA)	Environmental DNA that is collected from the environment, such as in seawater, rather than directly from an individual organism.
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed development over and above the existing circumstances (or 'baseline').
Environmental Impact Assessment (EIA) Regulations	A collective term referring to The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive as transposed by the Habitats Regulations and comprise Special Areas of Conservation and Special Protection Areas. In accordance with Scottish Government and UK Government policy, candidate SACs, potential SPAs and Ramsar sites are also afforded equivalent protection for assessment purposes, despite not being formally designated European sites.
Fish Stock	Any natural population of fish made up of an isolated and self-perpetuating group of the same species.
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 and equipment used for fishing.
Greenhouse gas	A gas in the Earth's atmosphere that traps heat by absorbing and emitting infrared radiation, a process known as the greenhouse effect. Also known by the collective shorthand "carbon".
Gross Value Added (GVA)	Measure of the value of goods and services produced in an area, industry, or sector of an economy.
Habitats Regulations	A collective term used to describe the Conservation of Habitats and Species Regulations 2017 and The Conservation (Natural Habitats, &c.) Regulations 1994.
Highest astronomical tide (HAT)	The highest level that can be expected to occur under average meteorological conditions and under any combination of astronomical conditions.
Inter-array cables (IACs)	Armoured cable containing electrical and fibre optic cores which link the wind turbine generators to each other and to the offshore substation platform(s).
International Council for the Exploration of the Seas (ICES) statistical rectangles	The International Council for the Exploration of the Seas (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.
Landfall	The area from Mean Low Water Springs to a transition bay(s), where the offshore export cable(s) come ashore.
Landings	Quantitative description of the amount of fish returned to port for sale, in terms of value or weight.
Lowest Astronomical Tide (LAT)	The lowest level that can be expected to occur under average meteorological conditions and under any combination of astronomical conditions.
MachairWind Offshore Windfarm	An offshore windfarm capable of exporting around 2 GW of renewable energy to the National Electricity Transmission System. MachairWind Offshore Windfarm comprises three Development Areas: • The WDA – located on the west coast of Scotland to the northwest of Islay and west of Colonsay;

Term	Definition
	• The Offshore Export Cable Corridor – a preliminary boundary extending from the WDA to mean high water springs at a landfall location near Girvan, South Ayrshire; and • The Onshore Transmission Development Area – a preliminary boundary which extends landward from mean low water springs and includes the land required for the landfall of the offshore export cables and their route up to but not including the proposed high voltage direct current switching station which will be developed and constructed by Transmission Owner, ScottishPower Transmission. Separate consent and licence applications will be submitted for each Development Area.
Management Units (MUs)	The MUs provide an indication of the spatial scales at which impacts of plans and projects alone, cumulatively and in-combination, need to be assessed for the marine mammal species in UK waters, with consistency across the UK.
Mean High Water Springs (MHWS)	The average, over a year, of the heights of two successive high waters during those periods of 24 hours (once every fortnight) when the range of the tide is greatest.
Mean Low Water Springs (MLWS)	The average, over a year, of the heights of two successive low waters during those periods of 24 hours (once every fortnight) when the range of the tide is greatest.
Mean sea level	The average level of the sea taking account of all tidal effects but excluding surge events.
National Electricity Transmission System	The high-voltage electricity power transmission network serving Great Britain which receives electricity from generators (such as offshore windfarms) and transmits that electricity to anywhere on the National Electricity Transmission System to satisfy demand.
Non-breeding season	Furness (2015) defines non-breeding season as the remaining part of the year that is not a part of breeding season.
Offshore export cable	Armoured cable containing electrical cores between the offshore substation platform(s) and landfall. Offshore export cables will include bundled fibre optic cables. The offshore export cables are subject to Marine Licence applications under the Marine (Scotland) Act 2010. The portion of the offshore export cable(s) located within the WDA is assessed as part of this MachairWind WDA EIA and a marine licence application to construct, alter or improve this portion has been submitted alongside the WDA application. A separate marine licence application will be submitted for the portion of the offshore export cable(s) from the WDA boundary to mean high water Mean High Water Springs.
Offshore Export Cable Corridor (ECC)	The preliminary boundary extending from the WDA to mean high water springs near Girvan, South Ayrshire and within which the offshore export cable(s) will be located. A separate marine licence application will be submitted for the offshore export cable(s) located within the Offshore ECC.
Offshore Substation Platform (OSP)	An offshore platform with a fixed foundation located within the WDA which houses electrical equipment such as transformers, switchgear, protection and control systems, and enables the windfarm's renewable electricity to be collected via inter-array cables and exported to the National Electricity Transmission System via offshore export cables.
Offshore Substation Platform (OSP) link cables	Electrical cables which link OSPs (if more than one OSP is required). These cables will include fibre optic cores or bundled fibre optic cables. OSP link cables will be wholly located within the WDA.
Onshore Transmission Development Area (OnTDA)	The preliminary boundary which extends landward from mean low water springs and includes the land required for the landfall of the offshore export cables and their route up to but not including the proposed high voltage direct current switching station which will be developed and constructed by Transmission Owner, ScottishPower Transmission. This Transmission Owner is responsible for consenting the high voltage direct current switching station. Onward connections to the National Electricity Transmission System will be consented by National Grid Electricity Transmission and ScottishPower Transmission. Where relevant, these are considered as part of cumulative effects assessment in the EIA.

Term	Definition
Operational life	The operational life is the expected length of time from final commissioning of the WDA until the cessation of commercial operations. This is anticipated to be 35 years.
Option Agreement Area (OAA)	The seabed area awarded to ScottishPower Renewables in January 2022 through the Scotwind leasing round.
OSPAR	OSPAR started in 1972 with the Oslo Convention against dumping and was broadened to cover land-based sources of marine pollution and the offshore industry by the Paris Convention of 1974. These two conventions were unified, updated and extended by the 1992 OSPAR Convention. OSPAR is so named because of the original Oslo and Paris Conventions ("OS" for Oslo and "PAR" for Paris).
Otter trawl	A net with large rectangular boards (otter boards) 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.
Permanent Threshold Shift (PTS)	A permanent total or partial loss of hearing sensitivity caused by acoustic trauma. PTS results in irreversible damage to the sensory hair cells of the ear, and thus a permanent reduction of hearing acuity.
Plan Option	A spatial plan area proposed through the Sectoral Marine Plan for offshore wind energy (as adopted in 2020). As part of the ScotWind leasing round, offshore wind developers submitted bids for Plan Options which, following a successful bid, become OAAs.
Pre-construction works	Pre-construction works are activities undertaken prior to formal commencement of construction. Examples include survey works such as geotechnical and geophysical surveys and seabed preparation activities.
Rochdale Envelope	An approach to environmental assessment which aims to take account of the need for flexibility in the future evolution of the detailed project proposal. The approach is named after two court rulings concerning outline planning applications for a proposed business park in Rochdale.
Safety zones	An area of water around or adjacent to a wind turbine generator or Offshore Substation Platform and associated substructure which is to be constructed, extended, operated or decommissioned, from which certain or all classes of vessels are excluded and within which activities can be regulated for the purpose of securing safety of the wind turbine generator, substructure or vessels in that vicinity, and individuals on both the wind turbine generator, substructure or vessel, in line with Section 95 of the Energy Act 2004.
Scottish Marine Area	The area of Scotland's territorial sea limit (up to 12 nautical miles from baseline) as defined in the Marine (Scotland) Act 2010.
ScotWind	A Crown Estate Scotland seabed leasing round which enabled developers to apply for propose offshore wind projects and apply for seabed rights to plan and build windfarms in Scottish waters.
Scour protection	Protective measures to avoid sediment being eroded away from the base of the wind turbine generator foundations as a result of the flow of water.
Swept Area Ratio	Swept Area Ratio (derived from Vessel Monitoring System data) indicates the number of times in an annual period that fishing gear makes contact with (or sweeps) the seabed surface. Surface Swept Area Ratio provides a proxy for fishing intensity.
The Applicant	The legal entity submitting consent applications for the MachairWind Offshore Windfarm, namely MachairWind Limited.

Term	Definition
The Lighthouse	The Dubh Artach lighthouse.
The Project	MachairWind Offshore Windfarm including all its Development Areas and associated infrastructure.
Vessel Monitoring System (VMS)	A system 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.
WDA infrastructure	The offshore generation and transmission infrastructure located within the WDA including but not limited to: WTGs, WTG fixed foundations (and associated scour protection), OSP(s), OSP fixed foundations (and associated scour protection), IACs, OSP link and offshore export cable(s) and their associated external cable protection (insofar as these are located within the WDA) and fibre optic cables.
WDA restricted build area	Refers to the area within the WDA which is considered unsuitable for the installation of WTG and OSP foundations for engineering and environmental reasons.
Wind Turbine Generator (WTG)	A wind turbine generator which converts wind energy into electrical energy. Each wind turbine generator is a complex system composed of a high number of components. Typically, the main components include the rotor assembly (composed of three blades and a hub); the nacelle (containing a generator, shaft and gearbox, power electronic converter and transformer); and the tower (containing lifting equipment and the switchgear).
Windfarm Development Area (WDA)	The application boundary within the OAA where consent will be sought for the proposed WDA infrastructure. The WDA infrastructure is subject to Section 36 consent and marine licence applications (generation and transmission) which are being applied for separately from the Offshore ECC infrastructure and OnTDA infrastructure.

12 COMMERCIAL FISHERIES

12.1 INTRODUCTION

1. This chapter presents an assessment of potential impacts and likely significant effects (LSE) on commercial fisheries that may arise from the construction, operation and maintenance (O&M), and decommissioning of the MachairWind Windfarm Development Area (WDA) infrastructure.

2. Due to the delay in the confirmation of the Project's grid connection location, (see **Chapter 1 Introduction** for further information), this topic chapter considers the WDA Study Area and existing environment only. A combined assessment of the construction, O&M and decommissioning of the WDA activities, Offshore Export Cable Corridor (ECC) and Onshore Transmission Development Area (OnTDA) activities (commensurate with the level of detail that is available at the time of carrying out that appraisal) is also provided. This approach will ensure a holistic view is undertaken of the entire Project. As noted in **Chapter 1 Introduction**, the assessment of potential effects on all receptors associated with the Offshore ECC and OnTDA will be presented in individual EIARs, which will be submitted separately in accordance with the relevant Environmental Impact Assessment (EIA) Regulations.

3. This chapter considers the following WDA infrastructure: wind turbine generators (WTGs), Offshore Substation Platforms (OSP) and associated fixed foundations and scour protection, inter-array cables (IACs), OSP link cables, the portion of the offshore export cable located within the WDA and associated cable protection.

4. This chapter has been prepared to provide the Marine Directorate - Licensing and Operations Team (MD-LOT) (on behalf of the Scottish Ministers) and stakeholders with sufficient information to determine the likely significant effect(s) of the Project on the receiving environment.

5. This chapter should be read in conjunction with the following related EIAR chapters:

   - **Chapter 3 Project Description** – which provides a detailed description of the Project and Project-related infrastructure;
   - **Chapter 4 Site Selection and Alternatives** – which describes the process of WDA boundary evolution from Scoping to EIAR, including updates relevant to commercial fisheries;
   - **Chapter 9 Fish (including Basking Shark) and Shellfish** – changes to fish, shellfish and elasmobranch ecology, including the distribution and abundance of species of commercial interest, have the potential to affect commercial fisheries if these species are targeted as a resource;
   - **Chapter 13 Shipping and Navigation** – changes to shipping and navigation, including the presence of fishing vessels in transit, as well as collision and safety considerations, have the potential to affect commercial fisheries activity; and
   - **Chapter 18 Socio-economics** – changes to socio-economics, including effects on employment, ancillary businesses and the wider supply chain, have the potential to influence commercial fisheries and associated communities.

6. Key inter-relationships between this chapter and those listed above will be considered where relevant and presented in this chapter.

7. Additional information to support the commercial fisheries assessment includes:

   - **Appendix 12.1 Commercial Fisheries Technical Report** – This provides a detailed characterisation of commercial fisheries, including fishing activity, fleet composition, and spatial distribution of effort. The information from the Commercial Fisheries Technical Report will be used to inform this Chapter.

- **Appendix 10 Fisheries Mitigation, Monitoring and Communication Plan** – The FMMCP sets out mitigation and monitoring measures, as defined in this Chapter, alongside the roles and responsibilities for their delivery.

8. This chapter was prepared by NiMa Consultants Limited.

12.2 LEGISLATION, POLICY AND GUIDANCE

9. The overarching policy and legislation relevant to the EIA is described in **Chapter 2 Policy and Legislative Context**. **Table 12.1** sets out the relevant legislation, policy and guidance that informs the assessment for commercial fisheries.

Table 12.1 Summary of relevant legislation, policy and guidance for commercial fisheries

Relevant Policy or Guidance	Relevance to the Assessment
Legislation	
Marine (Scotland) Act 2010	Establishes the statutory framework for marine planning and licensing in Scottish waters, including duties on public authorities to act in accordance with marine plans and to further sustainable development. It also enables designation and management of Marine Protected Areas (MPAs), which can introduce fisheries management measures that are relevant when considering cumulative spatial constraints and access to fishing grounds.
The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004	Introduces prohibitions and restrictions on specified fishing methods in defined inshore areas, forming part of the regulatory baseline for how fisheries operate. This is relevant to characterising which gear types are legally permitted in particular locations and the existing constraints on fishing activity.
Sea Fish (Conservation) Act 1967	Provides powers to conserve sea fish stocks through regulations controlling fishing activity (e.g., restrictions on methods, seasons, areas and size limits). It underpins fisheries management measures that influence the baseline conditions for commercial fishing activity and potential constraints that may interact with offshore development.
The Sea Fishing (Licences and Notices) (Scotland) Regulations 2011	Sets out requirements for licensing of sea fishing (including conditions attached to licences) and associated enforcement provisions in Scotland. This forms part of the regulatory framework governing where, when and how commercial fishing activity may be undertaken, supporting the description of the existing management context for affected fleets.
Inshore Fishing (Scotland) Act 1984	Provides powers for inshore fisheries management, including enabling the making of orders to regulate fishing within Scottish inshore waters. It supports local or regional restrictions on fishing activity and methods, which are relevant to understanding existing spatial and operational constraints in the baseline.
The Sandeel (Prohibition of Fishing) (Scotland) Order 2024	Prohibits fishing for sandeel in Scottish waters (subject to the scope defined in the Order), reflecting a specific fisheries management measure aimed at ecosystem and stock considerations. This is relevant to baseline fisheries characterisation by confirming that sandeel fishing is not a lawful commercial activity within the regulated area during the applicable period.
Aquaculture and Fisheries (Scotland) Act 2007	Updates fisheries and aquaculture management powers in Scotland, including enforcement provisions and regulation to support sustainable fisheries management. It contributes to the wider statutory framework that can affect fishing activity through management measures, compliance requirements and spatial/operational constraints.

Relevant Policy or Guidance	Relevance to the Assessment
Fisheries Act 2020	Provides the post-EU legislative framework for UK fisheries management, including statutory fisheries objectives (such as sustainability and ecosystem considerations) and powers to manage fishing activity. It shapes the overarching policy and regulatory context for fishing activity and management measures relevant to the baseline and to cumulative interactions with other marine uses.
Climate Change (Scotland) Act 2009 (indirect)	Establishes legally binding greenhouse gas emissions reduction targets for Scotland and duties relating to climate change action. While not fisheries-specific, it underpins the strategic driver for offshore renewable energy development in Scottish waters, providing wider policy context for the Project and the assessment.
Policy	
Draft Updated Sectoral Marine Plan (Scottish Government, 2025)	Principles integrated through detailed baseline characterisation of commercial fishing activity, early and continued consultation, which has directly informed the development of the WDA boundary. In addition, the Applicant has committed to additional mitigation (see **Section 12.10.1**), alongside measures such as early communication of construction activities and monitoring pre-, during and post-construction.
Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020)	This Chapter aligns with the Sectoral Marine Plan's objective of enabling offshore wind while minimising adverse effects on other marine users by assessing how the Project may affect commercial fishing activity (including access restrictions, displacement/interference and cumulative considerations) and by setting out embedded and additional mitigation measures in **Section 12.10.1**.
Scottish National Marine Plan (NMP) (Scottish Government, 2015) [Note that consultation on the draft National Marine Plan 2 (NMP2) is expected in 2026]	Reflecting the key issues that should be addressed in an impact assessment and any Fisheries Mitigation, Monitoring and Communication Plan (FMMCP), this EIA: • Assesses the potential impacts of the WDA Infrastructure on commercial fisheries in **Section 12.10.1**; and • Sets out measures to mitigate any constraints that the WDA Infrastructure may place on commercial fishing activity in **Section 12.9** and **Section 12.10.1**. This Chapter aligns with NMP policies, which at a high level require offshore development to take account of existing fishing activity, support co-existence where possible, assess effects on fishing grounds and fishing interests, and provide mitigation where effects cannot be avoided. Specifically of relevance to this Chapter are: • GEN 4: co-existence with other marine users; • FISHERIES 1: safeguard fishing activity where possible; • FISHERIES 2: consider impacts on fishing activity/grounds and fishing communities; • FISHERIES 3: mitigation/management where impacts cannot be avoided; and • RENEWABLES 8: early engagement with stakeholders in affected areas, including fisheries, to inform project development and mitigation.
United Kingdom (UK) Marine Policy Statement (MPS) (HM Government, 2011)	Reflecting the desire for co-existence of activities in the marine environment, this Chapter presents an assessment of potential impacts on commercial fisheries in **Section 12.10.1** and **Section 12.10.3**.
Guidance	

Relevant Policy or Guidance	Relevance to the Assessment
Fishing Liaison with Offshore Wind and Wet Renewables (FLOWW) Best Practice Guidance for Fisheries Liaison with Offshore Renewables Developments (FLOWW, 2025)	All guidance has been used to inform the development of baseline characterisation, as presented in **Section 12.8** and **Appendix 12.1: Commercial Fisheries Technical Report**, together with the impact assessments undertaken in **Section 12.10.1** and **Section 12.10.3**..
Good Practice Guidance for assessing fisheries displacement by other licensed marine activities (Scottish Government, 2022)	All guidance has been used to inform the development of baseline characterisation, as presented in **Section 12.8** and **Appendix 12.1: Commercial Fisheries Technical Report**, together with the impact assessments undertaken in **Section 12.10.1** and **Section 12.10.3**
Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments (United Kingdom Fisheries Economic Network and Seafish, 2012)	
Guidance on Commercial Fisheries Mitigation and Opportunities from Offshore Wind commissioned by Collaborative Offshore Wind Research into the Environment (COWRIE) (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 – Issue 8 (Offshore Energies UK, 2023)	
Fishing and Submarine Cables - Working Together (International Cable Protection Committee, Drew 2009)	
European Subsea Cables Association Guideline 01 and Appendices (ESCA, 2018)	
Guidance on preparing Mitigation and Monitoring Plans (Scottish Government, 2025)	
Guidance on Licensing and EIA requirements for offshore wind farms (Cefas, 2004)	
Recommendations for positive interactions between offshore wind farms and fisheries.	

12.3 CONSULTATION

10. This commercial fisheries chapter has been informed by engagement with stakeholders, including those listed below:

- Clyde Fishermen's Association (CFA);
- Communities Inshore Fisheries Alliance (CIFA);
- Mallaig and North West Fishermen's Association (MNWFA);
- Mull and Iona Fishermen's Association (MIFA).
- Scottish Fishermen's Federation (SFF);
- Scottish Pelagic Fishermen's Association (SPFA);
- South West Coast Regional Inshore Fisheries Group (SWCRIFG); and
- Scottish White Fish Producers Association (SWFPA).

11. As part of the consultation process, the Applicant presented the approach to assessment to stakeholders to offer transparency around the scoping methodology and rationale, capture stakeholder advice and guidance, and incorporate stakeholder feedback, where appropriate. A summary of the approach to stakeholder communication and consultation is outlined in **Chapter 6 Consultation and Stakeholder Engagement**.

12. The consultation outcomes in relation to the commercial fisheries are outlined in **Table 12.2**, which summarises stakeholder feedback, outlines how the Applicant has responded to the feedback received, and details how it has been considered within this assessment.

Table 12.2 Summary of consultation relevant to commercial fisheries

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
Pre-Scoping Opinion				
1.	26 January 2023 (Meeting)	SFF, SWFPA, CIFA and CFA	Introductory meeting to provide project overview. Discussion held on export cable route and potential alternatives for the Project to consider.	A high-level assessment of the Offshore ECC is provided in **Section 12.11.2**.
2.	25 September 2023 (Meeting)	SFF, SWFPA, CIFA and CFA	Follow-up meeting on cable routing activities undertaken and how the fishing industry could influence the spatial footprint and turbine layout of the WDA moving forward.	Detail of how the WDA has been refined through the pre-application process (including how commercial fishing interests have influenced this process) is provided in **Chapter 4 Site Selection and Alternatives**.
3.	12 March 2024 (Meeting)	SFF, CIFA, CFA and SWCRIFG	Meeting to provide an update on the Project, wherein queries were raised regarding the reductions to the W1 Plan Option Area and potential landfall locations on west coast of Scotland.	Detail of how the WDA has been refined through the pre-application process (including how commercial fishing interests have influenced this process) is provided in **Chapter 4 Site Selection and Alternatives**. The final landfall location for the Project has now been confirmed as Girvan in South Ayrshire, see **Chapter 3 Project Description** for further details.
4.	03 June 2024 (Workshop)	MD-LOT, Marine Scotland Science, SFF and SFPA	WDA Scoping Workshop to present the proposed approach to scoping for commercial fisheries. A primary point raised was for the fishing industry to be consulted in the development of the FMMCP. Other key points of feedback included a request for another meeting to be arranged to review and refine the definition of terms for the magnitude of an impact, and for the Project to consider the potential impact of fishing displacement from the Project's development activities.	A follow up meeting to discuss the approach to assessment was held on 07 August 2024 (I.D.5). The potential impact of displacement resulting from the Project has been assessed for the Project alone and cumulatively with other plans / projects in **Section 12.11** and **Section 12.12** respectively. The Project presented initial plans for the FMMCP to fisheries stakeholders in a meeting on 09 December 2025 and issued **Appendix 10 Fisheries Mitigation, Monitoring and Communication Plan** to stakeholders for review on 23 February 2026.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
5.	07 August 2024 (Meeting)	SFF, SWFPA and SPFA	Proposed approach to assessment presented. SFF queried the definitions for impact magnitude and sensitivity, including the use of duration thresholds – requesting clearer definitions. Concerns raised that fisheries impacts can appear systematically "low" based on current approach and request for assumptions/volatility to be transparently accounted for. SWFPA provided positive feedback in relation to scallop fishers on the refined WDA. Consensus that there is no single standard method for defining magnitude/sensitivity for fisheries. No objection to scoping out "additional steaming", given the fixed technology approach. SPFA queried why the "low adverse" duration had changed from five years (previous workshop) to two years.	The definitions for magnitude and sensitivity are provided in **Section 12.10.** Noting limited prescriptive fisheries guidance exists, magnitude is determined using a combination of duration and scale/extent of effect and is informed by data, consultation and expert judgement.. The Applicant confirmed landings are assessed using both tonnage and first sales value (alongside effort/swept surface area), using 10 to 12 years of data to capture variability and trends. The Applicant confirmed willingness to continue discussions to update the magnitude/sensitivity framework in response to stakeholder feedback. "Additional steaming" is proposed to be scoped out for all phases. The Applicant confirmed the "low adverse" duration was revised from five to two years in response to feedback from the previous workshop and reiterated that duration alone does not determine magnitude.
Scoping Opinion				
6.	09 January 2025	Argyll and Bute Council	Do you agree with the Study Areas defined for commercial fisheries? Yes, in general agreement. However, I would expect appropriate discussions and agreements with the commercial fisheries sector and their representatives (including consideration of financial impacts on this sector).	The commercial fisheries Study Areas have been defined to encompass all fishing activities that could realistically be affected by the WDA Infrastructure. The spatial extent has been informed and validated through engagement with local fishers and fishermen's associations.
7.	09 January 2025	Argyll and Bute Council	Do you agree with the data sources to be used to characterise the commercial fisheries baseline within the EIA? Yes, in general agreement. However, I would expect appropriate discussions with the commercial fisheries sector and their representatives.	The commercial fisheries baseline in **Section 12.8** and **Appendix 12.1 Commercial Fisheries Technical Report** draws on official statistics, Vessel Monitoring System (VMS)/ Automatic Identification System (AIS) and other published datasets, supplemented by consultation with fishermen and their associations. Ongoing engagement is used to confirm that these data appropriately represent fishing activity within the Study Areas.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
8.	09 January 2025	Argyll and Bute Council	Are there any additional data sources or guidance documents that should be considered? None that I am aware of. However, I would expect appropriate discussions on any additional data sources with the commercial fisheries sector and their representatives.	Stakeholder consultation is being used to identify and obtain supplementary information, such as plotter data and local knowledge, where available. Any additional data sources identified through further engagement will be considered in refinements to the baseline.
9.	09 January 2025	Argyll and Bute Council	Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on commercial fisheries receptors? Yes, in general agreement, subject to the commercial fisheries sector recommendations.	Embedded mitigation measures for commercial fisheries are set out in **Section 12.9** and further developed, where relevant, in **Section 12.11**. These, together with any additional measures, are taken forward into the Fisheries Mitigation, Monitoring and Communication Plan (FMMCP), which will be developed in consultation with the fishing industry.
10.	09 January 2025	Argyll and Bute Council	Do you agree with the scoping in and out of impact pathways in relation to commercial fisheries? Yes, in general agreement to scope in and scope out of impact pathways as per recommended. However, impact pathways 1 and 6 described in Table 12.5 Potential impacts scoped in or scoped out for commercial fisheries are more relevant for the commercial fisheries sector and their representatives to answer.	The impact pathways relevant to commercial fisheries, including navigational safety and gear interactions, are assessed in **Section 12.11**. The scope reflects issues raised by fishing representatives during consultation.
11.	09 January 2025	Argyll and Bute Council	Do you agree with the proposed assessment methodology for commercial fisheries? Yes, in general agreement, subject to the commercial fisheries sector recommendations. Do you have any other matters or information sources that you wish to be presented in the EIAR? No	The assessment methodology, including criteria for magnitude and sensitivity, is set out in **Section 12.10** and applied in **Section 12.11**. Definitions have been refined following discussion with SFF and other sector representatives to improve clarity and consistency. Engagement with Argyll and Bute Council and the commercial fisheries sector will continue as the Project progresses, and any further information provided will be considered in ongoing project development and mitigation.
12.	09 January 2025	CFA	Having experience on working on cable projects on the West Coast and Renewables on the East Coast of Scotland we note that the plans of the developers (in the case of Machair, Scottish Power) often make strong efforts to engage with stakeholders in good faith from the outset. However we would also note that common issues start to occur when contractors	The FMMCP will include clear protocols for communication with the fishing industry regarding project activities, including any deviations from agreed plans or works undertaken under emergency licences. Contractors will be required to follow these protocols, with communication via Notices to Mariners and the Offshore Fisheries Liaison Officer (OFLO).

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
			come in to complete the work and there can be deviations from the originally proposed plans and routes, this is when issues for local fishing fleets present generally. We would urge strong communication throughout the project, particularly if there should be any changes. We note that in the past emergency licences have been used at short notice by contractors on the grounds of safety, but indeed this can lead to safety issues for local fishermen if this is not communicated effectively or if local fishing boats activity is not fully considered.	
13.	09 January 2025	CFA	We note the socio-economic impact doesn't detail too strongly on impacts to fishing which could be negative, not only from the Machair site itself but particularly from the cable routes. The cable routes are likely to impact on very valuable scallop, prawn, lobster, finfish and crab ground, and we would note this should be fully considered and mitigated and where appropriate compensated if impact is significant. We would stress that all fishing gear types should be engaged with fairly (mobile/static etc), particularly if displacement occurs to any gear type which is damaging. In the past we have seen individual fishermen approached whilst others have not been and this has caused significant issues between fishermen. These issues happened with other companies, but we are aware of the issues this can cause. Fishing is a community most likely to be impacted by the site and the cables and so we feel this must be fairly reflected as the project develops.	The present EIAR chapter relates to the WDA Infrastructure; the export cable route will be subject to separate EIA. However, **Section 12.11.2** considers combined effects of the array and export cable on fisheries. The baseline (**Section 12.8**, **Appendix 12.1 Commercial Fisheries Technical Report**) and assessment (**Section 12.11**) address both mobile and static gear sectors, and engagement with all gear types is being undertaken on an equitable basis, including in relation to potential displacement, mitigation and any future cooperation mechanisms.
14.	09 January 2025	CFA	We should also stress that in some cases where fishing might be possible in some respects in relation to renewable sites, it is often the case that vessel insurance and safety aspects would not be covered, so more fishing ground may in practice be lost than is reflected in theory.	Practical constraints on fishing access, including insurance and safety considerations, are recognised in the assessment of the physical presence of infrastructure and associated safety measures (**Section 12.11**). Turbine layout, cable configuration and operational practices will be developed, as far as reasonably practicable, to enable safe coexistence with compatible fishing activity, with preferences informed by ongoing engagement.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
15.	09 January 2025	CFA	We are also aware of EMF work ongoing regarding renewable sites and cabling and would stress any research should be considered as it evolves	Electromagnetic field (EMF)-related effects associated with submarine cables and infrastructure are addressed in the relevant ecological chapters, with implications for commercial fisheries considered in **Section 12.11**. Emerging research on EMF will be kept under review and, where necessary, used to inform design and operational measures within the regulatory framework.
16.	09 January 2025	CFA	We have relayed to Machair team that we are keen to work with them on cable routes and the burial routes, we have already fed in and we would welcome practical involvement as the project moves forward to minimise impacts to fisheries and push on coexistence, for example observers onboard to help advise on routes, minimise rockdump and mattressing giving a preference to mud burial. We note that any cable protection which presents a risk to safe fishing will be an issue for local fishermen and should be avoided.	Cable routeing and burial will be optimised to minimise interactions with key fishing grounds and to reduce the requirement for cable protection that could increase snagging risk. Preferences for burial in softer sediments, where technically achievable, will be considered. Practical input from fishers, including local knowledge and feedback on routeing, will be sought through consultation and reflected in the FMMCP, subject to health and safety and regulatory constraints.
17.	09 January 2025	Marine Directorate - Science, Evidence, Data and Digital (MD-SEDD)	MD-SEDD note the presence of a >15m potting fleet active across the array area, and advise that the layout and spacing of turbines within the array area is designed to facilitate coexistence with this fleet where possible. Consultation with the fishing industry is advised to determine if smaller or larger turbine spacing is preferable.	The presence and requirements of the >15 m potting fleet are recognised in the development of turbine layout. Coexistence principles, including provision of practicable transit and working corridors where possible, will be considered in consultation with potting vessel operators and their representatives.
18.	09 January 2025	MD-SEDD	On page 281 in Table 12.2 it says “The Applicant confirmed that the sprat fishery would be added to the list of receptors in the commercial fisheries assessment.”, however the sprat fishery is not listed as a key receptor in section 12.7.4. MD-SEDD advise that the sprat fishery is assessed in the commercial fisheries assessment.	The pelagic fishery for herring and sprat is included as a commercial fisheries receptor and described in **Section 12.8**, with activity and landings data presented in **Appendix 12.1 Commercial Fisheries Technical Report**. Potential impacts are assessed in **Section 12.11** and included in the cumulative assessment in **Section 12.12**.
19.	09 January 2025	MD-SEDD	MD-SEDD note that the impact of additional steaming times has been scoped out of the assessment and that the SWPFA, SPFA and SFF have all agreed that this can be scoped out. MD-SEDD agree this can be scoped out.	The impact pathway relating to additional steaming times has been scoped out, in line with advice from fisheries representatives, and no change is proposed to this approach.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
20.	09 January 2025	MD-SEDD	MD-SEDD advise that the Scotmap data should not be relied upon to provide information on the commercial fisheries baseline for the inshore fleet as it is out of date. MD-SEDD advise that this dataset should be used only to validate information gathered through consultation with local fishers and stakeholders. MD-SEDD note that the <12m fleet account for a large proportion of landings within the local study area and therefore advise the importance of consultation to help identify the fishing grounds for these vessels.	ScotMap is used only as a supplementary and contextual dataset to support understanding of inshore activity. The baseline for the <12 m fleet (**Section 12.8, Appendix 12.1 Commercial Fisheries Technical Report**) is primarily based on more recent gridded fisheries data, landings statistics and targeted consultation with inshore fishers.
21.	09 January 2025	MD-SEDD	In section 12.7.3 the applicant states that “Mapping for vessels 12 m and under is available for all Scottish vessels, without distinguishing gear type.” MD-SEDD advise that the Scottish Government gridded fisheries data for Under 12 metre vessels (2018-2022) is split by gear type, and is a more up to date source of fishing activity for<12m fleet than the Scotmap data. The gridded data is available as heat map layers on Marine Scotland Maps and can also be downloaded via Spatialdata.gov.scot. The layers can be quickly accessed from the links at the bottom of this page: Fishing - Activity data and statistics | Marine Scotland Information.	Scottish Government gridded fisheries data for under-12 m vessels split by gear type (2018 to 2022) have been incorporated into the baseline. **Section 12.8** and **Appendix 12.1 Commercial Fisheries Technical Report** clarify the use of these datasets to improve representation of inshore fishing activity.
22.	09 January 2025	MD-SEDD	MD-SEDD advise that applicants include AIS data provided by EMODNet which gives the amount of time spent by fishing vessels in a location. These can be found via emodnet.ec.europa.eu under “vessel density”, and provide a useful way to visualise fishing activity spatially. These provide a better indication of fishing intensity than the AIS route density data presented in the scoping report, as they weight the movement of a vessel through a grid quare with how long the vessel has stayed in that square and how much of the square it has covered.	European Marine Observation and Data Network (EMODnet) AIS vessel density layers have been used alongside other VMS and landings data to characterise spatial patterns and intensity of fishing activity. This combined approach is described in **Section 12.8** and **Appendix 12.1 Commercial Fisheries Technical Report**.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
23.	09 January 2025	MD-LOT	The Scottish Ministers are broadly content with the proposed study area as detailed in Section 12.6 of the Scoping Report, however, highlight the representation made by the SFF regarding consideration of pelagic fisheries as a commercial fisheries receptor, and request that this is considered in the EIA report.	The pelagic fishery for herring and sprat is now explicitly included as a commercial fisheries receptor in **Section 12.8** and assessed in **Section 12.11**. Relevant activity and value are reported in **Appendix 12.1 Commercial Fisheries Technical Report**.
24.	09 January 2025	MD-LOT	The Scottish Ministers are also broadly content with the data sources used to characterise the baseline as detailed in Table 12.3. However, the Scottish Ministers advise that AIS data, provided by EMODNet, and the use of ScotMap data should be used to further inform the baseline characterisation, as detailed in the MD-SEDD commercial fisheries advice. Additionally, the Scottish Ministers highlight the representation made by the SFF with regards to the use of pre-Brexit data to ensure a realistic baseline of fishing activity and the collection of fishing plotter data from fisheries organisations and specific data from smaller vessels and request that this is fully considered in the EIA Report. Finally, the Scottish Ministers highlight the representation made by the SFF with regards to commercial fishing of non-UK vessels and request that this is considered in the EIA Report.	EMODnet AIS data have been incorporated to enhance understanding of fishing intensity. ScotMap is used only as a secondary validation tool. Pre-Brexit data are included where available to provide a realistic temporal baseline, as described in **Section 12.8** and **Appendix 12.1 Commercial Fisheries Technical Report**. Plotter data and other spatial information supplied by fishermen and their organisations are being used to complement statutory datasets. Information on non-UK fleets and landings into non-UK ports is included where obtainable, with remaining gaps identified in **Appendix 12.1 Commercial Fisheries Technical Report**.
25.	09 January 2025	MD-LOT	Table 12.5 of the Scoping Report summarises the impacts proposed to be scoped in and out of the EIA Report for commercial fisheries. The Scottish Ministers are broadly in agreement with the impacts to be scoped out and in, however, in line with MD-SEDD commercial fisheries advice, advise that sprat fishery is included as a receptor in the commercial fisheries assessment. This view is supported by SFF. Additionally, for the avoidance of doubt the Scottish Ministers advise that “physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging” must be scoped in for all phases of the Proposed Development. The Scottish Ministers also draw attention to the representation made by SFF regarding human casualties and gear snagging	The pelagic sprat and herring fisheries are included as receptors and assessed accordingly. The “physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging” is scoped in for all phases and assessed in **Section 12.11**, with cross-reference to navigation safety. Boulder and UXO clearance activities are considered as part of the construction-phase assessment, including potential interactions with fisheries.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
			and request that this is fully considered in the EIA Report. In addition, the Scottish Ministers highlight the SFF representation relating to boulder and UXO clearance for consideration.	
26.	09 January 2025	MD-LOT	In terms of mitigation, the Scottish Ministers highlight the representation from the SFF who advise that a Fisheries Management and Mitigation Strategy should be developed in consultation with the SFF and the fishing industry. In addition, the Scottish Ministers direct the Developer to the SFF representation regarding proposals works taking place on the Proposed Development being shared via a Notice to Mariners, appointment of an Offshore Fisheries Liaison Officer, and the use of safety zones and the subsequent impact on fishing activities, which the Scottish Ministers recommend are considered.	A Fisheries Mitigation, Monitoring and Communication Plan (FMMCP) has been developed (**Appendix 10**), incorporating the embedded mitigation in **Section 12.9** and additional measures identified in **Section 12.11**. The FMMCP will be prepared in consultation with SFF and the wider fishing industry and will set out communication measures (e.g. early Notices to Mariners), the role of the OFLO and management of safety zones.
27.	09 January 2025	MD-LOT	With regards to the proposed assessment methodology, the Scottish Ministers direct the Developer to the SFF representation with regards to guidelines used to define the magnitude of impact and sensitivity of receptors for consideration.	**Section 12.10** sets out the methodology for defining magnitude of impact and receptor sensitivity, with indicators developed and refined following consultation with SFF. While no formal national guidelines currently exist, the approach follows established EIA practice and is applied consistently.
28.	09 January 2025	MD-LOT	The Scottish Ministers direct the Developer to the SFF representation regarding design aspects of the Proposed Development, including WTG foundations, inter-array cables, cable burial and protection, scour protection and decommissioning. The Scottish Ministers advise that these must be considered by the Developer when finalising the design parameters for the Proposed Development.	The design envelope for foundations, IACs, burial depths, cable protection, scour protection and decommissioning has been assessed in terms of interactions with fisheries in **Section 12.11**. Final design decisions will seek to minimise adverse effects on fisheries, as far as reasonably practicable, and will continue to be informed by engagement with fishing representatives.
29.	09 January 2025	MD-LOT	The Scottish Ministers are content with the cumulative impacts considered in Section 10.6.3.	Cumulative effects on commercial fisheries arising from the Project and other relevant plans and projects are assessed in **Section 12.12**, including consideration of marine protected areas. The cumulative assessment will be reviewed as necessary in light of project and regional development.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
30.	22 November 2024	Scottish Fisherman's Federation (SFF)	SFF is of the view that there are no approved guidelines to set realistic criterion to define the magnitude of impact and sensitivity of receptors for commercial fisheries and referring it to 'expert judgement' would be unrealistic and misleading. Therefore, guidelines need to be adopted in consultation with the fishing industry representatives to address this issue. In addition, SFF would like to see that the impact of the Development is assessed on individual fishing vessels affected by the Development versus the whole fleet/fishery.	**Section 12.10** sets out explicit indicators and criteria for magnitude and sensitivity, refined following discussion with SFF, while recognising that professional judgement is still required. The primary assessment is undertaken at fishery/fleet-segment level, because assessing individual fishing businesses as separate receptors is not possible due to confidentiality of data at individual scale. The distributional effects on individual vessels and highly dependent fleets are considered through targeted engagement and addressed, where appropriate, in the assessment and through the FMMCP.
31.	22 November 2024	SFF	SFF appreciates the Applicants commitment to use longer term data in the EIA. We reiterate the importance of pre-Brexit data to be utilised for the EIA Report to present a realistic baseline of fishing activities within the study area, as some types of fisheries have been curtailed post Brexit.	Pre-Brexit data are included in the baseline (**Section 12.8, Appendix 12.1 Commercial Fisheries Technical Report)** to reflect historic patterns of activity and value and to avoid under-representing fisheries that may have changed post-Brexit. Temporal trends are described where relevant.
32.	22 November 2024	SFF	Fishing plotter data from fishermen, SFF and associations should be used as AIS and VMS data do not represent all fishing activities within the study area. In general collection of fishing plotter data (screen shots) from the fisheries organisations, and any specific data from smaller vessels that are not required to use AIS or VMS is recommended. In addition, the SFF notes from section 12.7 EXISTING ENVIRONMENT that a description of the commercial fish targeted by vessels registered in UK, Norway, Sweden, Denmark, and Ireland and landed into UK ports (for all vessels) and non-UK ports (for UK vessels only) is provided. This indicates that the landing data for non-UK vessels into non-UK ports is missing (which is a major data gap). To provide a comprehensive picture of fishing activities and their values from the study area, collection and presentation of landing data for non-UK vessels into non-UK ports is imperative. We propose practical ways should be sought to fill in this gap.	Plotter data and local spatial information provided by SFF and fishers are being used to supplement AIS/VMS and landings data, improving representation of fishing patterns. Available information on non-UK vessels and landings into non-UK ports has been incorporated where practicable; remaining limitations and their implications are identified in **Appendix 12.1 Commercial Fisheries Technical Report**.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
33.	22 November 2024	SFF	Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on commercial fisheries receptors? No. Following need to be considered in respect with the proposed embedded mitigation: • We would appreciate the inclusion of 'the Fisheries Management and Mitigation Strategy (FMMS)' to be developed and adopted pre-consent in consultation with fishing industry to ensure all fishing industry's concerns are considered and addressed accordingly. • As part of the proposed commitments, there is no measure for disruption payments for fishing vessels. SFF suggest that a cooperation agreement should be considered for both the static and mobile gears where they are required to be relocated, or the impact is deemed to be significant. • In relation to 'Development of and adherence to a VMP and NSP), that will include Notice to Mariners (NtM)'. We suggest that NtM are issued in sufficient time to avoid any disruptions to fishing activities in the intended area. • Utilise the services of an O.F.L.O with sufficient knowledge of fisheries and fishers that utilise the development area. • M -23 (Safety Zones) proposes that safety zones (SZ) during the operational phase are also being considered. The Environmental Impact Assessment (EIA) will include an assessment of the proposed approach to Safety Zones at the point of application. The SFF realise the need for use of SZ during construction, major maintenances and decommissioning stages and we propose it should be considered on a rolling basis. However, we object to using/applying SZ during the operational phase of the 'proposed development' as they restrict fishing activities within the array area.	The FMMCP (**Appendix 10**) will function as a fisheries management and mitigation strategy, to be agreed prior to construction in consultation with SFF and other fisheries stakeholders. It will set out procedures for proactive Notices to Mariners, the role of an experienced OFLO, and management of safety zones. While disruption payments and cooperation agreements are primarily commercial matters, their potential role will be discussed with affected fishers. Safety zones during construction, major maintenance and decommissioning will be sought and managed in line with legislation, and potential effects are assessed in **Section 12.11**. During the operational phase, safety zones may be applied for in relation to major maintenance activities, and will be temporary covering the specific period of maintenance.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
34.	22 November 2024	SFF	Do you agree with the scoping in and out of impact pathways in relation to commercial fisheries? SFF notes from Table 13.2 (p319) that 'Physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging' has been scoped in. We agree with this being scoped in; however, since snagging in some limited cases can result in human casualties, we propose that the possibility of a loss of life should also be highlighted as a risk of snagging hazards not just to fishing gear.	**Section 12.11** recognises that gear snagging can have both economic and safety-of-life implications. Mitigation measures, including appropriate cable burial, minimisation of surface protection where practicable, and clear marking and communication of hazards, are designed to reduce these risks as far as reasonably practicable, with cross-reference to the navigation assessment.
35.	22 November 2024	SFF	Do you agree with the proposed assessment methodology for commercial fisheries? No. Following comments need to be addressed: The SFF is of the view that the definitions of terms relating to the 'magnitude of an impact' and 'sensitivity of the receptor' are vague and the set criteria to define them are unrealistic. For instance, 'Table 12.6 Definition of terms relating to the magnitude of an impact' defines the 'high adverse impact' as: "Impact is expected to result in one or more of the following: • Substantial loss of target fish or shellfish biological resource (e.g., loss of substantial proportion of resource within project area); and • Substantial loss of ability to carry on fishing activities (e.g., substantial proportion of effort within project area). And/or: Impact is of long-term duration (e.g., greater than 12 years) and/or is of extended physical extent" In the former definition, the terms 'substantial loss' and 'substantial proportion' are vague and there are no measurement criteria to clarify what volume/size they depict/represent. In addition, we are not sure where the definition of long-term duration (e.g., greater than 12 years) come from. We want to know what scientific measures have been used to set a baseline of 12 years for long-term duration?	**Section 12.10** has been refined to provide clearer explanatory text and, where possible, indicators are provided for each of the categories, including "substantial loss" and "substantial proportion". Duration categories, including the 12-year threshold for long-term effects, are aligned with typical practice for major infrastructure and a significant portion of the Project operational life.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
36.	22 November 2024	SFF	We have similar concerns in regard to defection of 'medium and low adverse impacts'	Definitions for medium and low adverse impacts have similarly been clarified in **Section 12.10** by adding descriptive indicators. This is intended to enhance transparency and provide a clearer basis for significance judgements.
37.	22 November 2024	SFF	In addition, 'Table 12.7 Definition of terms relating to the sensitivity of the receptor' defines the 'high sensitivity of the receptor' as: "Receptor is highly vulnerable to impacts that may arise from the project and recoverability is long term or not possible. And/or: No alternative fishing grounds are available." Again, the term 'highly vulnerable' has not been defined and it is open to wide interpretation. In addition, a reference to non-availability of alternative fishing ground is not acceptable as the impact assessment should focus on the Development impacts in regard to the existing fishing activities within the 'development array area'	Sensitivity definitions in **Section 12.10** now more explicitly describe the factors considered, including dependence on specific grounds, availability of alternative grounds in practice, gear mobility and adaptive capacity. The assessment focuses on impacts on existing fishing activities within and around the array area; references to alternative grounds are used only to characterise relative vulnerability, not to assume that displacement is straightforward or without consequence.
38.	22 November 2024	SFF	Therefore, the SFF is of the view that there are no approved guidelines to set realistic criterion to define the magnitude of impact and sensitivity of receptors for commercial fisheries and referring it to 'expert judgement' would be unrealistic and misleading. We propose that guidelines need to be adopted in consultation with the fishing industry representatives to address this issue. In addition, SFF would like to see that the impact of the Development is assessed on individual fishing vessels affected by the Development versus the whole fleet/fishery.	**Section 12.10** sets out explicit indicators and criteria for magnitude and sensitivity, refined following discussion with SFF, while recognising that professional judgement is still required. The primary assessment is undertaken at fishery/fleet-segment level, because assessing individual fishing businesses as separate receptors is not possible due to confidentiality of data at individual scale. The distributional effects on individual vessels and highly dependent fleets are considered through targeted engagement and addressed, where appropriate, in the assessment and through the FMMCP.
39.	22 November 2024	SFF	Do you have any other matters or information sources that you wish to be presented in the EIAR? Yes. SFF notes from section 12.7.4 Commercial Fisheries Receptors (p303) that pelagic fisheries (sprat and herring) were not listed as 'commercial fisheries receptor' in the study area while 'Figure 12.6' list herring and sprat among the top ten species by weight tonnes from 2018 to 2022 landed from the	The pelagic fishery for herring and sprat is now explicitly identified as a commercial fisheries receptor in **Section 12.8**, with detail provided in **Appendix 12. Commercial Fisheries Technical Report**. Potential impacts, including loss of access to grounds within the array and displacement, are assessed in **Section 12.11** and considered in the cumulative assessment in **Section 12.12**.

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
			commercial fisheries Regional Study Area for UK and Manx vessels. In addition, (based on 2018-2022 data from MMO, 2023a), landings of pelagic fish species accounted for 7% of the total landed weight, of local study area (p287). As pelagic fisheries will not be able to resume with the array area post development, we would appreciate the reason why the pelagic fisheries have not been regarded as a commercial fisheries receptor within the study area!?	
Post-Scoping Opinion				
40.	05 February 2025 (Project Update Meeting (In person, Mull)) One-to-one meetings (Islay, Mull and Northern Ireland), February 2025	Mull and Iona Fishermen's Association (MIFA) Local fishers	Feedback provided regarding the operation of the WDA site investigation campaign in 2023.	Applicant listened to and incorporated fishers' feedback on 2023 site investigation campaign into approach for 2025 site investigation campaign of WDA, such as mobilizing survey earlier in the year (Spring 2025), and providing clearer communication channels (created interactive map of survey area, providing live updates for fishers to view).
41.	24 march 2025 (Project Update Meeting)	SFF, SPFA, SWFPA	Discussion of fishing activity in and around the WDA and of the proposed methodology for the commercial fisheries impact assessment. Stakeholders requested for the proposed WDA EIA methodology to be shared ahead of the WDA EIA consent submission for consultation.	The Project team presented the draft impact assessment methodology for commercial fisheries, including the approach to defining Study Areas, receptors, magnitude and sensitivity. Feedback from SFF, SPFA and SWFPA has been used to refine the methodology set out in **Section 12.10**.
42.	11 June 2025 (Local Navigation Hazard Workshop)	Local fishers, CFA and Northern Lighthouse Board	A detailed description of the project was given to local fishers on Islay and other maritime stakeholders, followed by a navigation hazard workshop. Stakeholders raised concerns about interaction of project-related vessels with set fishing gear, in particular the risk of buoys being cut by vessel propellers. Fishing within the wind farm area during construction and	Issues raised at the workshop have been taken into account in the navigation risk assessment and commercial fisheries assessment. Measures to minimise interaction between project vessels and fishing gear, including routeing protocols, gear-interaction procedures and use of an Offshore Fisheries Liaison Officer, will be set out in the Navigation Management Plan and FMMCP. The design and operation of the WDA will

I.D.	Date/ Engagement Activity	Consultee	Stakeholder Comment	Applicant Response
			operation was discussed, with differing views on perceived risk and the likely extent and timing of resumption of fishing activity.	seek to enable safe coexistence with compatible fishing activity, subject to statutory safety zones.
43.	02 July 2025 (Regional Navigation Hazard Workshop)	SFF, SWFPA, Maritime and Coastguard Agency	Updates to the WDA red-line boundary were presented and discussed at a regional Navigation Hazard Workshop with multiple stakeholders. The distance of the WDA from Colonsay and from the Dubh Artach lighthouse was considered in relation to navigation and search-and-rescue requirements.	The revised WDA boundary and associated separation distances from Colonsay and the Dubh Artach lighthouse have been incorporated into the Project design and navigation risk assessment. Stakeholder feedback from the workshop has informed the evaluation of navigation routes, aids to navigation and emergency response arrangements.
45.	09 December 2025 (Project Update Meeting)	SFF, SWFPA, SPFA, CFA, SWCRIFG	Project progress and key findings from the commercial fisheries assessment and navigation risk work were presented, together with emerging proposals for fisheries mitigation, monitoring and communication .Key requests arising from this meeting of relevance to the assessment presented within this chapter included: • Spurdog, herring and blue-fin tuna should be considered within the EIAR baseline; and • Figure presenting pelagic fishing should be amended to display a wider area around the EIAR.	The update session confirmed stakeholders' priorities regarding coexistence, communication and mitigation. Comments from SFF, SWFPA, SPFA, CFA and RIFG are being used to finalise the commercial fisheries assessment (**Section 12.11**) and to develop the FMMCP, including arrangements for ongoing liaison with the fishing industry. Regarding the specific requests, details of spurdog, herring and blue-fin tuna have been included in **Section 12.8.1** and Figure 7.22 of **Appendix 12.1 Commercial Fisheries Technical Report** has been amended to display a wider area around the WDA.

12.4 EXISTING DATA SOURCES

13. **Table 12.3** sets out the information and data sources that have been used to inform this chapter.

14. For the purposes of this Chapter, a desk-based review was undertaken using relevant spatial and scientific data sources.

15. Data has been sourced from International Council for the Exploration of the Seas (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.

16. Where data sources allow, a five to ten-year (or longer) 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 to 2016; 2016 to 2020; or 2011 to 2023.

17. Relevant literature from several sources has also been reviewed in the preparation of this report. A full list of references is provided at the end of this report and are cited within the text where appropriate.

18. **Appendix 12.1 Commercial Fisheries Baseline Report** includes full details of the analysis undertaken to develop the commercial fisheries baseline.

Table 12.3 Summary of key datasets and information sources

Dataset	Description	Citation
Landings statistics, 2011-2024	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 (£).	MMO, 2022a; MMO, 2024a; MMO, 2025
VMS, 2016-2020	VMS data for UK registered vessels ≥15 m length displaying the first sales value (£) of catches.	MMO, 2022b
VMS, 2016-2023	Spatial distribution of fishing activity for the UK over 12 m fleet 2016-2023, visualised using the cumulative proportion of fishing effort (kWh) by gear type	MMO, 2025
AIS, 2019-2023	Fishing vessel route density, based on vessel AIS positional data. AIS is required to be fitted on fishing vessels ≥15 m length.	European Maritime Safety Agency, 2024
VMS, 2017-2021	Scottish fishing vessel VMS data indicating fishing intensity by gear type.	Marine Directorate, 2025
NMPi Spatial mapping, 2016-2022	NMPi 2016-2022 value landed by gear type for under 12 m vessel	Marine Scotland MAPS NMPi, 2024
NMPi Spatial mapping, 2009-2013	NMPi (various publication dates) Marine Scotland MAPS NMPi (2023) fisheries datasets.	Marine Scotland MAPS NMPi, 2024
Sectoral Marine Plan, N/A	Sectoral Marine Plan, including description of regional commercial fisheries activity.	Scottish Government, 2020
Draft Updated Sectoral Marine Plan for	Draft Updated SMP for offshore wind (2025) and supporting plan-level material providing Scottish Government advice on potential implications for commercial fisheries (e.g., displacement, coexistence,	Scottish Government, 2025c

Dataset	Description	Citation
Offshore Wind Energy, N/A	cumulative effects), including context on Plan Option NE7 and plan evolution.	
Strategic Environmental Assessment, N/A	SEA supporting the Draft Updated SMP, including plan-level assessment of likely significant environmental effects and identification of constraints and sensitivities relevant to commercial fisheries (e.g., fishing intensity and gear types; spatial design constraints/occupancy assumptions).	Scottish Government, 2025d
Social and Economic Impact Assessment, N/A	SEIA supporting the Draft Updated SMP, providing a plan-level economic valuation of potential impacts on commercial fisheries and highlighting relevant mitigation principles (e.g., early engagement, cable burial/monitoring, information dissemination; potential coexistence considerations). The SEIA includes spatial mapping for under 12 m vessels based on average value (2016-2022) (see nmPi Spatial mapping, 2016-2022 above) and VMS data for over 12 m vessels by gear type (see VMS, 2016-2023 above).	Scottish Government, 2025e
VMS, 2013-2021	Scottish Pelagic Fishermen's Association (SPFA) VMS data for Scottish pelagic trawl member vessels for 2013-2021.	SPFA, 2024a
Plotter data, 2013-2021	SPFA plotter data for Scottish pelagic trawl member vessels indicating location of fishing.	SPFA, 2024b
VMS and AIS, 2012-2021	Fisheries Sensitivity Mapping and Displacement Modelling of AIS and VMS data to indicate fishing effort (hours) number of vessels and sensitivity index for period 2012-2021.	Cefas, 2025
Surveillance data, 2017-2022	Surveillance data indicating vessel nationality and gear type for actively fishing vessels.	Marine Directorate, 2023
Plotter data, Unknown	SFF vessel plotter data indicating location of fishing. [Confidential]	SFF, 2025
Plotter data, Unknown	SWFPA vessel plotter data indicating location of fishing. [Confidential]	SWFPA, 2025
Survey data, 2023	Scouting survey data to log presence of fishing gear and fishing vessels	Brown and May Marine, 2023

19. The Project has carefully considered the Draft Updated Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2025) and its supporting assessments, including the Strategic Environmental Assessment (Scottish Government, 2025) and the Social and Economic Impact Assessment (SEIA) (Scottish Government, 2025). These documents provide Scottish Government advice on the potential implications of offshore wind development for commercial fisheries, highlighting issues such as displacement, coexistence, and cumulative effects.

20. The Draft Updated SMP (Scottish Government, 2025) highlights the importance of balancing the interests of fisheries and offshore wind, with ongoing dialogue between sectors. It is noted that the SEIA commercial fisheries assessment for the Draft Updated SMP assumes that, for fixed bottom offshore wind projects, fishing activity will not take place during active construction but that some types and level of fishing activity are likely to resume during the operational phase. This is consistent with assumptions made in this project-level assessment.

12.5 SITE-SPECIFIC SURVEY DATA

21. In addition to the existing data sources identified in **Section 12.4**, the Project has undertaken site-specific surveys to inform the EIA (**Table 12.4**). These surveys were not primarily carried out with a view to characterising fishing activity but do provide useful contextualised information to support the commercial fisheries baseline and assessment.

Table 12.4 Site-specific survey data

Dataset	Year(s)	Description

Project's site investigation	2023	A site investigation survey was undertaken by the Project across the OAA. The following works were undertaken by Fugro:
		• Geophysical survey (2 km x 500 metres (m) line spacing)
		  ○ Side Scan Sonar
		  ○ Multibeam Echosounder
		  ○ Sub Bottom Profiler
		  ○ Magnetometer
		• 57 benthic sediment grabs for contaminant, faunal, biomass and particle size distribution analysis;
		• 59 transects of Drop-down video (DDV) with seabed photographs; and
		• 29 water samples for environmental DNA analysis.
		See **Appendix C Contaminants Survey Report**, **Appendix D MachairWind 2023 Benthic Characterisation Report** and **Appendix E Environmental DNA Survey Interpretative Report** submitted with the MachairWind Scoping Report.[1]

Winter Vessel Traffic Survey	2023	A Vessel Traffic Survey undertaken by the Project across the full OAA, plus a 10 nautical mile (nm) buffer, consisting of: • AIS; • Radio detection and ranging; and • Visual observations. This survey was undertaken from 01 to 16 December 2023.
Summer Vessel Traffic Survey	2024	A Vessel Traffic Survey undertaken by the Project across the full OAA, plus a 10 nm buffer, consisting of: • AIS; • Radio detection and ranging; and • Visual observations. This survey was undertaken from 16 August to 01 September 2024.

12.6 COMMERCIAL FISHERIES STUDY AREA

22. The 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 WDA is located within the UK territorial waters 12 nautical miles (nm) boundary, with the majority within the 6 nm boundary. 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.

23. The WDA is located across two ICES rectangle: 40E3 and 41E3; which forms the commercial fisheries local Study Area for the purposes of the EIAR (**Figure 12.1**).

24. To understand fishing activity in waters adjacent to the Project, a commercial fisheries regional Study Area has been defined to include the commercial fisheries local Study Area together with the

[1] https://marine.gov.scot/?q=node/25686

surrounding ICES rectangles, covering 12 ICES rectangles in total. 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.

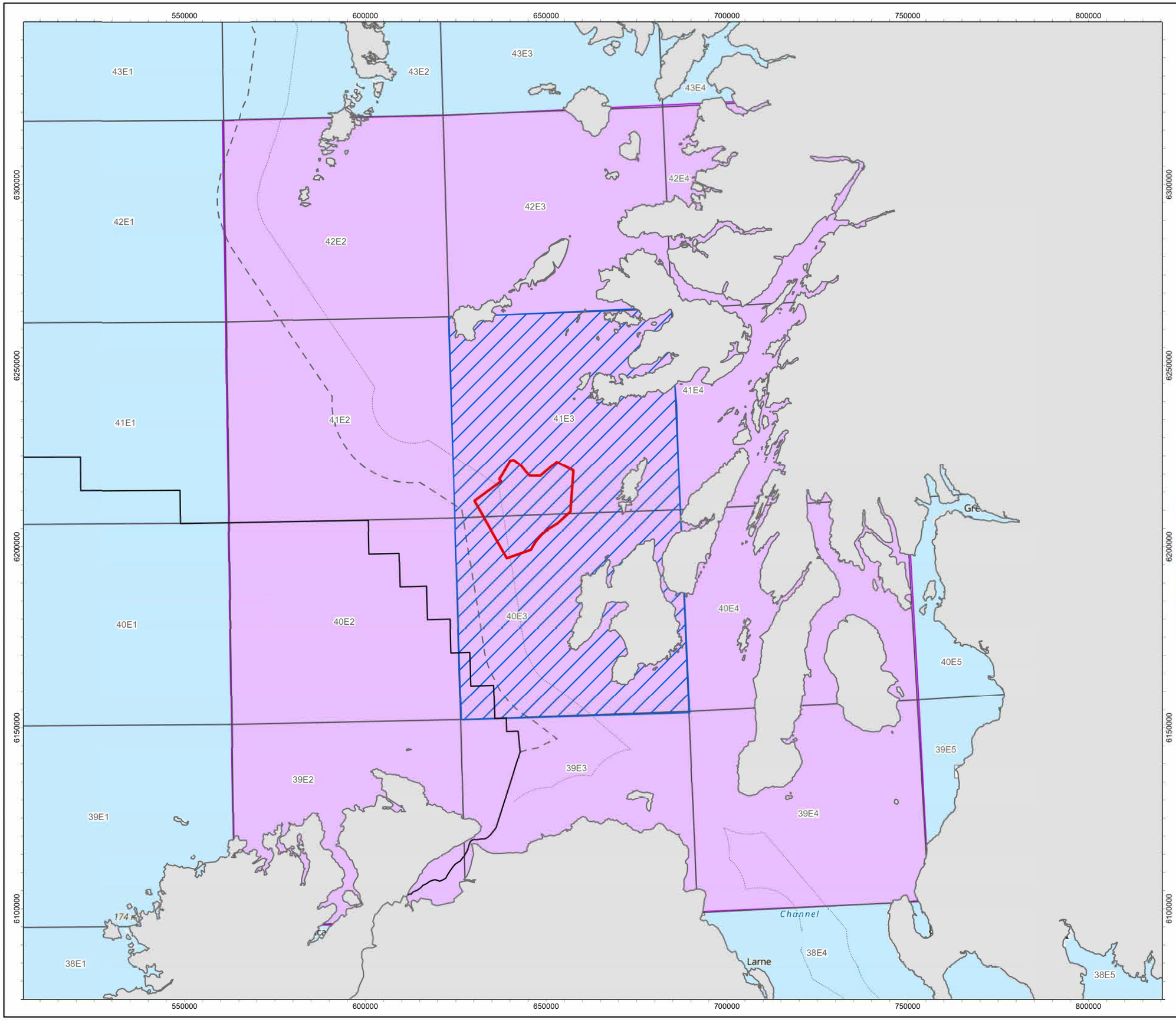
25. To summarise, there are two scales of commercial fisheries Study Areas as follows:

- Commercial fisheries local Study Area: 40E3 and 41E3;
- Commercial fisheries regional Study Area: 39E2-39E4, 40E2-40E4, 41E2-41E4 and 42E2-42E4.

12.7 REALISTIC WORST-CASE SCENARIOS

26. The final design of the WDA will be confirmed by detailed engineering studies post-consent. To undertake a robust and precautionary impact assessment, the realistic worst-case design scenarios (i.e., those that would cause the greatest impact) are defined from the Project Design Envelope; ensuring that all other design scenarios would have equal or less impact. Please see **Chapter 5 EIA Methodology** for further details on the design envelope approach.

27. The realistic worst-case scenarios for the commercial assessment are summarised in **Table 12.5** below. These are based on the Project design as described in **Chapter 3 Project Description**.



REV	REV DATE	GIS CREATOR	GIS REVIEWER	TECHNICAL CHECKER	TECHNICAL APPROVER
1	01/05/2024	FN	SM	CB	PB

DRAWING NUMBER	MCW-DWF-ENV-MAP-RHS-000142		
DATUM	ETRS89	PROJECTION	UTM Zone 29N
SCALE	1:1,000,000	PAGE SIZE	A3
PROJECT TITLE	MachairWind		

Figure 12.1 Commercial Fisheries Study Areas

NOT TO BE USED FOR NAVIGATION

nima CONSULTANTS

ScottishPower Renewables

Project: D:\Projects 2024\1027 MachairWind\FMMCP\1.1_FMMCP.aprx
Name: MCH_ETRS89_UTM29N_A3_Landscape_Template_Contractor_Consultant

Table 12.5 Realistic worst-case scenarios for impacts on commercial fisheries

Impact	Realistic Worst-Case Scenario	Rationale
Construction		
Impact 1: Reduction in access to, or exclusion from the WDA	**Construction:** • Construction phase to last up to 5 years; • Total area of the WDA: 448 km^2; **Safety Zones** • 500 m Safety Zones around construction activities related to surface-piercing WDA infrastructure; • 50 m Safety Zones around partially complete structures or complete structures; • 500 m advised safe working distance around construction vessels engaged in active construction works. **Seabed preparation** • Max prepared seabed area total WTGs: 1,537,600 m^2. **Wind turbine generators (WTGs) and foundations** • Maximum number of WTGs: 144; • Foundation type: fixed, suction bucket jacket; • Maximum seabed footprint occupied by WTGs: 608,400 m^2; • Maximum seabed footprint occupied by WTGs including scour protection: 5,496,530 m^2; • Minimum wind turbine spacing: 944 m; • Layout pattern: WTGs spaced evenly within the WDA in a regular pattern (straight or curved lines are possible). **Offshore Substation Platforms (OSP)** • Maximum number of OSPs: 2; • Foundation type: fixed, gravity base structure; • Maximum seabed footprint occupied by OSPs: 30,000 m^2; • Maximum gravity base structure scour protection area for OSPs: 240,000 m^2. **Inter-array cables (IACs)** • Maximum length of IACs: 572 km;	The scenario represents the maximum duration and extent of fishing exclusion throughout the construction phase and, hence, the greatest potential to restrict access to fishing grounds. It is assumed that construction activities could occur anywhere within WDA at any given time. It is assumed that fishing will not resume within areas defined as Safety Zones and advised safe working distances.

Impact	Realistic Worst-Case Scenario	Rationale
	• Cable burial minimum depth: 0.3 m; • Cable burial maximum depth: 3 m; • Maximum width of seabed affected during cable installation (including spoil heaps): 20 m; • Area of seabed disturbance: 10,420,000 m^2; • Installation / burial techniques: jetting (e.g. water jetting swords), technical cutting (e.g. chain or wheel cutter trencher), ploughing, mass / controlled flow excavator, dredging, hybrid tools, or combining any of these techniques; • Maximum proportion of cable requiring protection: 10%; • Maximum cable protection dimensions: 3 m high x 13 m wide; • Maximum number of cable crossings: 0; • Maximum area of cable protection: 677,300 m^2; • Cable protection types: rock placement, concrete mattresses, frond mattresses, protective aprons or coverings, bagged solutions, cable protection system (e.g. uraduct shell or similar), cast iron shells. **OSP link cables** • Maximum length of link cables: 272 km; • Cable burial minimum depth: 1 m; • Cable burial maximum depth: 3 m; • Maximum width of seabed affected during cable installation (including spoil heaps): 20 m; • Area of seabed disturbance: 2,720,000 m^2; • Installation / burial techniques: jetting (e.g. water jetting swords), technical cutting (e.g. chain or wheel cutter trencher), ploughing, mass / controlled flow excavator, dredging, hybrid tools, or combining any of these techniques; • Maximum proportion of cable requiring protection: 10%; • Maximum cable protection dimensions: 3 m high x 13 m wide; • Maximum area of cable protection due to ground conditions: 176,800 m^2; • Maximum number of cable crossings: 2; • Maximum length of crossings: 250 m; • Maximum area of cable protection due to cable crossings: 27,000 m^2;	

Impact	Realistic Worst-Case Scenario	Rationale
	• Cable protection types: rock placement, concrete mattresses, frond mattresses, protective aprons or coverings, bagged solutions, cable protection system (e.g. uraduct shell or similar), cast iron shells. **Offshore export cable(s)** • Maximum total length of offshore export cable located within the WDA: 200 km; • Maximum length of individual offshore export cables located wholly within the WDA: 50 km; • Cable burial minimum depth: 1 m; • Cable burial maximum depth: 3 m.	
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	As described for Construction Impact 1.	The scenario represents the maximum duration and extent of fishing exclusion throughout the construction phase and, hence, the greatest potential to lead to displacement of fishing effort.
Impact 3: Displacement or disruption of commercial resources	As described for **Chapter 9 Fish (including Basking Shark) and Shellfish**.	The scenario for fish and shellfish ecology receptors represents the maximum potential disturbance to commercial fisheries resources.
Impact 4: Increased Project vessel traffic leading to interference	Maximum number of all types of vessels operating on site simultaneously during construction: 117 Inclusive of following activities: • Foundation Installation: 38 vessels (2,455 return trips); • Wind turbine installation: 16 vessels (970 return trips); • OSP installation: 9 vessels (750 return trips); • IAC installation: 37 vessels (599 return trips).	The maximum number of wind turbines and associated offshore infrastructure will lead to the highest level of construction activities and therefore highest level of construction vessel round trips. The maximum number of vessels transits and the maximum duration of the construction would result in the greatest potential for interference.
Impact 5: Gear snagging leading to loss of earnings	As described for Construction Impact 1.	The scenario represents the maximum number and extent of Project infrastructure being constructed and, hence, the greatest potential for gear snagging to occur.
Operation and Maintenance		

Impact	Realistic Worst-Case Scenario	Rationale
Impact 1: Reduction in access to, or exclusion from the WDA	• Operational lifetime: up to 35 years; • All other parameters as for Construction Impact 1. <u>Maintenance activities</u> • 500m Safety Zones around major maintenance activities at WTGs. Safety Zones will not be applied for or in place at other times or locations within the WDA during the operational phase when maintenance is not being carried out; • 500 m advised safe working distance around maintenance vessels engaged in active maintenance works.	The scenario 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. During the O&M phase it is assumed that fishing will resume within the WDA, with exception of the physical footprint of Project infrastructure and temporary safety zones, exclusion zones and safe passing distances related to maintenance activities.
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	As described for O&M Impact 1.	The scenario represents the maximum duration and extent of fishing exclusion throughout the O&M phase and, hence, the greatest potential to lead to displacement of fishing effort.
Impact 3: Displacement or disruption of commercial resources	As described for **Chapter 9 Fish (including Basking Shark) and Shellfish**.	The scenario for fish and shellfish ecology receptors represents the maximum potential disturbance to commercial fisheries resources.
Impact 4: Increased Project vessel traffic leading to interference	Maximum number of maintenance vessels on site at any one time (per year): 8 Inclusive of: • Crew Transfer Vessels: 2 vessels (180 return trips per year); • Service Operation Vessel (SOV): 2 vessels (24 return trips); • SOV daughter craft: 4 vessels (24 return trips).	The maximum number of wind turbines and associated offshore infrastructure will lead to the highest level of maintenance activities and therefore highest level of maintenance vessel round trips.
Impact 5: Gear snagging leading to loss of earnings	As described for O&M Impact 1.	The scenario represents the maximum number and extent of Project infrastructure and, hence, the greatest potential for gear snagging to occur.
Decommissioning		
Impact 1: Reduction in access to, or exclusion from the WDA	A Decommissioning Programme will be submitted to MD-LOT for consultation and approval. The Decommissioning Programme will be updated during the lifespan of MachairWind to take account of changing best practice and new technologies.	In the absence of detailed methodologies and schedules, decommissioning works and associated implications for

Impact	Realistic Worst-Case Scenario	Rationale
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	The approach for decommissioning is yet to be determined, however, for the purposes of this Realistic Worst-Case Scenario total removal of all offshore infrastructure including buried cables and cable protection has been assumed, and as such the environmental impact of decommissioning will be the same if not lower than construction.	commercial fisheries are considered analogous with those assessed for the construction phase.
Impact 3: Displacement or disruption of commercial resources		
Impact 4: Increased Project vessel traffic leading to interference		
Impact 5: Gear snagging leading to loss of earnings		

12.8 EXISTING ENVIRONMENT

12.8.1 Existing Baseline

12.8.1.1 Overview of Landings

28. As outlined in **Section 12.2**, two commercial fisheries Study Areas are used in this Chapter: a local Study Area and a regional Study Area. The commercial fisheries local Study Area is defined as ICES statistical rectangles 40E3 and 41E3. The WDA overlaps with approximately 7.6% of the combined area of these rectangles. The wider commercial fisheries regional Study Area includes these rectangles and the adjacent rectangles 39E2 - 39E4, 40E2 - 40E4, 41E2 - 41E4 and 42E2 - 42E4. This two-tier approach recognises that most commercial fish and shellfish populations are distributed over wider spatial scales and provides the context needed to understand potential displacement of fishing activity.

29. Landings statistics for UK-registered vessels have been analysed for the period 2011 to 2023, with supporting EU Data Collection Framework data available for 2012 to 2016. For this summary, emphasis is placed on the most recent five-year period (2019 to 2023), with longer-term trends referenced where informative. The 5-year window aligns with EIA good practice and is considered to characterise current conditions and near-term evolution of commercial fisheries activity in the absence of the Project.

30. Across 2011 to 2023, the commercial fisheries local Study Area supports a mixed inshore fishery dominated by shellfish species. On average, approximately £6.6 million (first-sale value) per year was landed from the local Study Area during 2019 to 2023, compared with around £5.5 million per annum over 2014 to 2018 and £6.4 million per annum over 2011 to 2013. This indicates relatively stable, but fluctuating, landed value over the 13-year time series, with a recent uplift in activity relative to the mid-2010s.

31. Brown crab is the single most valuable species landed from the local Study Area. Average annual landings of brown crab over 2011 to 2023 are valued at approximately £1.6 million, increasing to around £2.1 million per year over 2019 to 2023. Nephrops is the second most economically important species, followed by king scallop, with average annual landed values of approximately £1.6 million and £1.2 million respectively over the full time series. Lobster (£0.77 million per annum), velvet crab (£0.43 million per annum) and razor clam (£0.42 million per annum) are also important contributors to local landings value, with lobster and razor clam showing notable growth in recent years.

32. By landed weight, local landings are similarly dominated by brown crab, with an average of about 903 tonnes per annum across 2011 to 2023. King scallop landings average around 563 tonnes per annum, with high catches in 2011 to 2014, a marked reduction to a low in 2018, and a return to average levels from 2021 onwards. Nephrops landings exhibit an overall downward trend over the time series, while catches of sprat are sporadic and velvet crab landings are comparatively stable.

33. The nationality profile of landings from the local Study Area reflects its importance to the Scottish and Northern Irish fleets. Scottish-registered vessels account for approximately 85% of landed value, Northern Irish vessels for about 14%, and English vessels for around 1%, a pattern that has remained consistent over the time series.

34. Within the commercial fisheries local Study Area, pots and traps are the dominant fishing gears by landed value. Average landings by pots and traps are around £3.2 million per annum, with a pronounced peak in 2018 to 2019 coinciding with high brown crab landings. Subsequent years (2020 to 2023) show reduced brown crab landings but sustained value from potting, reflecting the contribution of other pot-caught species such as lobster, velvet crab and nephrops.

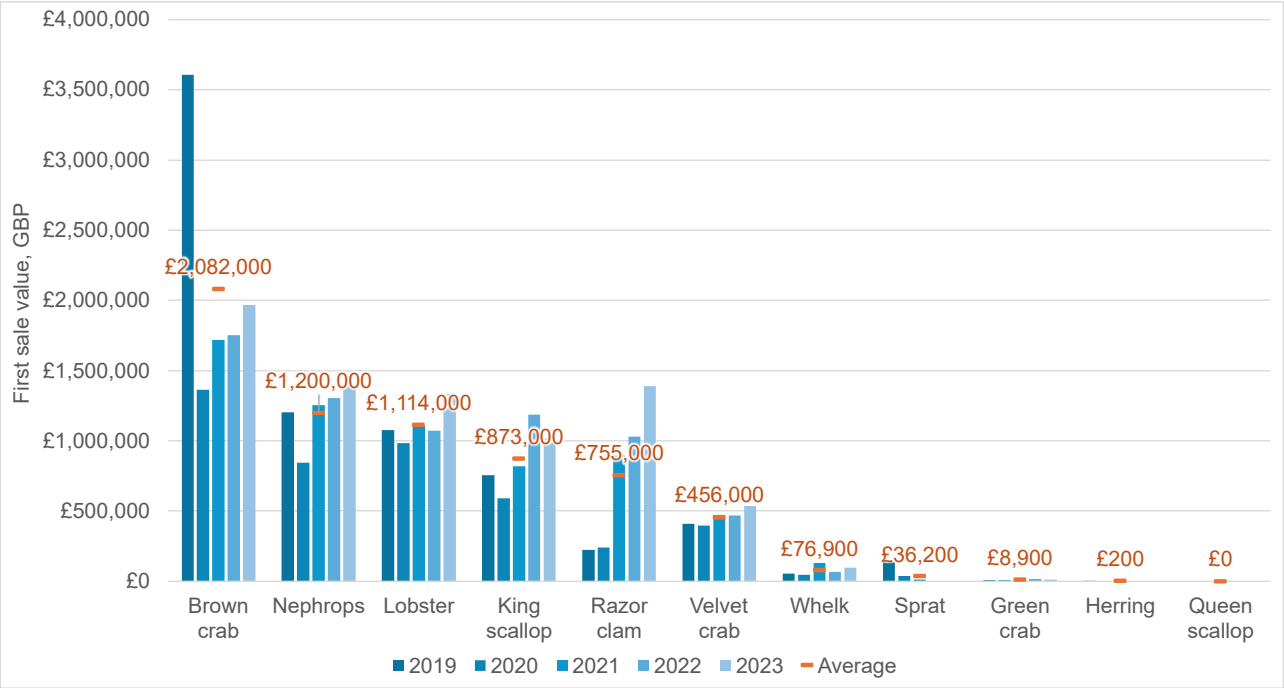


Plate 12.1 Average Annual Landed Value of Key Species from the Local Commercial Fisheries Study Area, Based on 5-year Average from 2019 to 2023

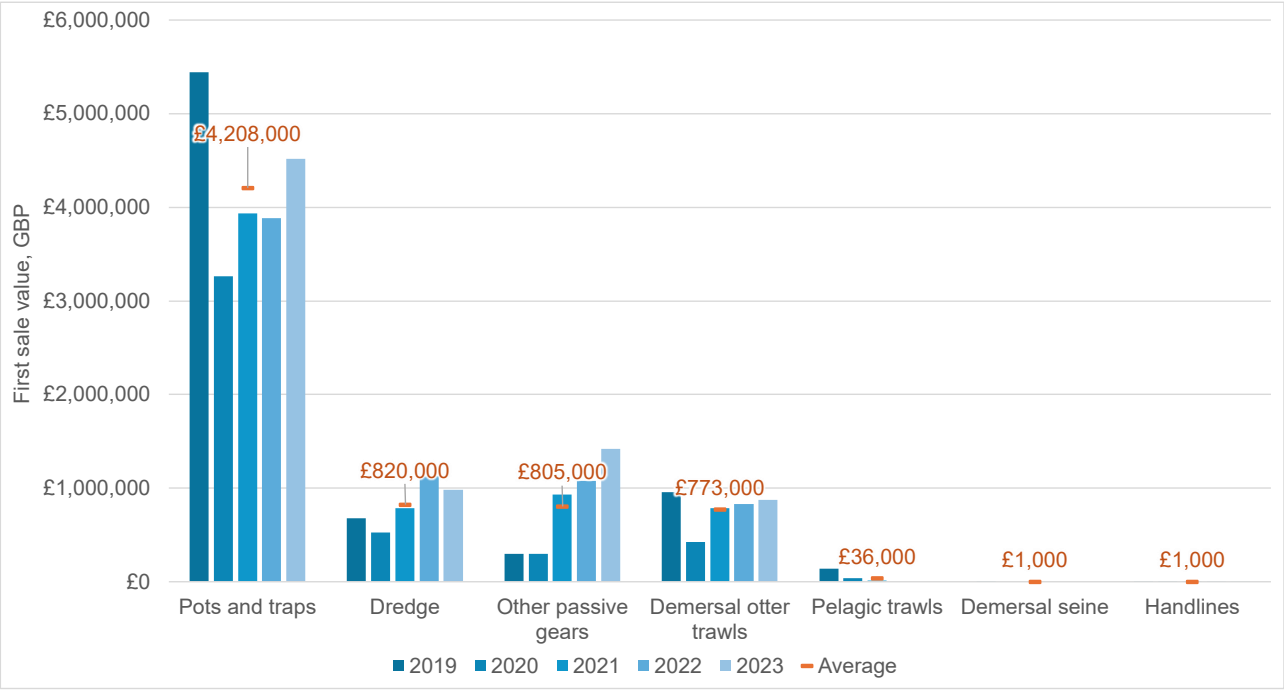


Plate 12.2 Average Annual Landed Value (£) by Gear Type from the Local Commercial Fisheries Study Area, Based on 5-year Average from 2019 to 2023

35. Seasonal patterns of landings from the local Study Area are strongly species-specific. Brown crab landings peak in autumn and early winter; king scallop landings are concentrated in summer and autumn; nephrops landings peak in spring and summer; velvet crab is landed relatively evenly throughout the year with a marked spike in December; razor clam is predominantly landed from

spring through autumn; lobster landings peak in summer, particularly August; and whelk is mainly landed in spring and early summer.

36. In the wider commercial fisheries regional Study Area, landings are dominated by nephrops and mackerel by both value and weight, reflecting the influence of mixed demersal trawl and pelagic fleets operating across the West of Scotland. King scallop, brown crab, lobster and velvet crab are also important species, with king scallop showing higher landings at the regional scale than in the local Study Area.

37. Landings from the regional Study Area are predominantly made by Scottish-registered vessels (approximately 82% of value), with Northern Irish vessels contributing around 16% and smaller contributions from Isle of Man, Irish, English, Welsh and Channel Islands vessels. By gear type, pots and traps account for almost half of total landed value, followed by demersal otter trawls and dredges. Pelagic trawls, demersal seines, beam trawls and handlines make smaller contributions to overall value.

12.8.1.2 Landings by Port of Landing

38. Landings from the local Study Area are made into a network of mainland and island ports. Oban (Mainland Argyll) consistently records the highest landed value from the local Study Area over 2019 to 2023, followed by island ports including Tiree, Fionnphort (Mull), Port Ellen (Islay) and Crinan. Smaller ports such as Ulva Ferry and Bunessan (Mull), Bowmore and Port Askaig (Islay), and other minor landing points record lower, but locally important, values associated with small-scale inshore fisheries.

39. The composition of landings varies between ports, reflecting differences in local fleet characteristics and target species. Oban receives a diverse mix of landings dominated by lobster, nephrops, king scallop and brown crab. Tiree, Fionnphort and Port Askaig are primarily supported by brown crab and nephrops. Port Ellen shows substantial landings of king scallop and nephrops, while Crinan is more strongly associated with king scallop and lobster. At smaller ports such as Greencastle, Islay and Bunessan, landings are composed mainly of nephrops, brown crab and ballan wrasse, with occasional landings of mackerel and velvet crab.

40. Trends in landed value by port over 2019 to 2023 generally show fluctuating or slightly declining values, reflecting variable fishing effort and stock availability. One notable outlier is Rathmullen, which recorded a single year of exceptionally high landings value in 2019 due to brown crab landings by Northern Irish vessels using pots and traps.

12.8.1.3 Fishing Activity by Gear Type

41. **Potting (creel) fisheries** are the principal activity within the commercial fisheries local Study Area and across much of the regional Study Area. The inshore fleet is dominated by vessels under 10 m in length operating from ports along the west coast of Scotland and the Inner Hebrides, including Oban, Port Ellen and Port Askaig (Islay), Fionnphort and Ulva Ferry (Mull), and Tiree. These vessels primarily target brown crab, lobster, velvet crab and nephrops using strings of baited pots deployed on or near the seabed, typically within 6 to 12 nm of the coast.

42. Spatial data for potting activity from under-12 m vessels, based on Scottish landings value and ScotMap interviews, indicate potting activity across most of the WDA and adjacent inshore waters out to 6 nm, with areas of high value close to shore, including immediately north of Islay. Older amalgamated VMS data for crab fisheries (2009 to 2013) show high-intensity crab fishing across the north-western portion of the WDA. More recent VMS data for vessels ≥15 m indicate targeted potting by larger vessels within parts of the WDA in 2017 and 2020.

43. ScotMap data and fishing industry plotter data, while historic and confidential respectively, corroborate the presence of moderate-to-high levels of potting activity within and around the WDA, and confirm that the WDA overlaps areas of established inshore potting grounds used by locally based vessels.

44. Fisheries Sensitivity Mapping and Displacement Modelling (FiSMaDiM) data, based on merged AIS and VMS information for 2012 to 2021, indicate moderate-to-high potting effort within the WDA and surrounding local Study Area. These findings are consistent with other spatial datasets and stakeholder feedback.

45. **Demersal otter trawlers** operating in the regional Study Area target both a mixed demersal finfish fishery (including haddock, whiting, squid and monkfish) and a nephrops fishery, using internationally recognised TR1 (≥100 mm mesh) and TR2 (70-99 mm mesh) gear types.

46. VMS and intensity mapping indicate that demersal otter trawl activity has very limited overlap with the WDA. Within the local Study Area, the majority of demersal otter trawl activity is located to the east and south of the WDA, including grounds south of Jura and Islay and within the Clyde region. Nephrops grounds, identified from amalgamated VMS intensity layers, do not overlap with the WDA, but are concentrated in adjacent ICES rectangles associated with fine muddy sediments.

47. **Demersal seine** activity is low across the regional Study Area, with mapping of VMS and swept-area ratio data indicating very limited activity and no notable overlap with the WDA. Where present, demersal seine activity is generally focused in areas separate from the inshore potting grounds that dominate the WDA and immediate surroundings.

48. FiSMaDiM data, based on merged AIS and VMS information for 2012 to 2021, indicate relatively low demersal trawl and demersal seine effort within the WDA, with higher demersal effort and vessel numbers to the north and northwest of the Project.

49. **Scallop dredgers** operating in the region target king scallop using rigid dredges towed along the seabed, with larger vessels (>20 m) operating widely around the UK and smaller vessels (<15 m) focusing on local inshore grounds. Within the commercial fisheries regional Study Area, dredge activity is concentrated to the north and east of the WDA. VMS and swept-area ratio mapping indicate very low levels of dredge activity within the WDA itself, with a discrete area of scallop dredging immediately to the north of the WDA that has been avoided through refinement of the Project boundary. FiSMaDiM data for 2012 to 2021, indicate no dredge effort within the WDA.

50. **Pelagic trawl** fisheries in the regional Study Area target mackerel, herring, horse mackerel and sprat using mid-water trawls operated by larger vessels (typically >40 m). These fisheries are highly seasonal (approximately 8 to 12 weeks per year), with vessels tracking migratory shoals over broad areas of the West of Scotland. VMS data show no pelagic trawl activity within the WDA, with activity located further offshore and to the northwest. FiSMaDiM data for 2012 to 2021, indicate no pelagic trawl effort within the WDA.

51. **Diving, rod-and-line and set net fisheries**: Under-12 m fleets also include scallop and razor clam diving vessels, rod-and-line vessels targeting mackerel and other small pelagic species, and small-scale set-net fisheries targeting various shellfish and finfish species. ScotMap and under-12 m value mapping indicate no scallop diving activity within the WDA and negligible value associated with diving, rod-and-line and set nets across the WDA. These activities are focused very close inshore and along coastal margins outside the WDA footprint.

12.8.1.4 Commercial Fisheries Receptors

52. On the basis of the baseline evidence described above and the more detailed characterisation in **Appendix 12.1 Commercial Fisheries Technical Report**, the key fishing fleets (and associated

EIA receptors) that operate across the commercial fisheries local and regional Study Areas, and that are relevant to the assessment, are:

- UK (primarily Scottish and Northern Irish) potting vessels targeting brown crab, lobster, velvet crab and green crab;
- Irish potting vessels targeting brown crab, lobster, velvet crab and green crab;
- UK (primarily Scottish) potting vessels targeting either nephrops, whelk or ballan wrasse with species specific pots;
- UK (primarily Scottish and Northern Irish) demersal otter trawlers (TR1 and TR2 gear types) targeting nephrops and/or haddock, whiting, squid and monkfish;
- UK (primarily Scottish) scallop dredgers targeting king scallop;
- UK (primarily Scottish) commercial diving targeting razor clam (under licensed trial fishery) and king scallop;
- UK (primarily Scottish) vessels using gear with hooks, including handlines, jigging or rod-and-line, targeting mackerel and other small pelagic species;
- UK (primarily small-scale local fishers) operating set nets around Islay, Colonsay and Mull, primarily for mixed demersal species including shellfish;
- UK (primarily Scottish) pelagic trawlers targeting mackerel, herring, horse mackerel and sprat; and
- Non-UK (primarily Dutch, Danish, German and Irish) pelagic trawlers targeting mackerel, herring, horse mackerel and sprat.

53. Landings statistics and spatial mapping confirm that, within the WDA, inshore potting by small vessels is the principal fishing activity, with demersal trawl, dredge and pelagic trawl fleets active mainly elsewhere within the regional Study Area.

12.8.2 Predicted Future Baseline

54. In line with the EIA Regulations, the commercial fisheries assessment must consider how baseline conditions are likely to evolve in the absence of the Project, taking into account natural change and foreseeable management-driven change to the extent that these can be assessed with reasonable effort. The future baseline is considered in terms of commercial fisheries resources, patterns of fishing activity and the management framework influencing fisheries within the commercial fisheries Study Areas.

55. Commercial fisheries patterns in the West of Scotland fluctuate in response to a range of factors, including market demand and prices, stock abundance, fisheries and environmental management, gear development and broader sustainability considerations. For example, fleets respond to changes in demand (including shocks such as the 2020 to 2021 COVID-19 pandemic), adjust target species according to relative prices, and may modify gear types to improve efficiency or respond to new management measures and buyer expectations (e.g. sustainability certification).

56. The baseline analysis for the Project draws on up to 13 years of data (2011 to 2023) for landings and spatial activity, with more recent datasets (e.g. VMS, AIS, FiSMaDiM and marine traffic surveys) providing insight into current spatial patterns. Given this temporal coverage and the dominance of non-quota shellfish species in both local and regional landings, it is expected that the future baseline over the assessment time frame will generally continue to be represented by the recent five-year period (2019 to 2023), albeit with normal year-to-year variability.

57. Following the UK's withdrawal from the EU, the UK - EU Trade and Cooperation Agreement (TCA) has established a transition period (1 January 2021 to 30 June 2026) during which UK and EU vessels continue to access each other's EEZs, with EU vessels also permitted to fish in specified parts of UK waters between 6 nm and 12 nm. Under the TCA, 25% of the EU's quota share in UK waters is being transferred to the UK over the transition period, with future fishing opportunities

determined through annual negotiations. However, across the commercial fisheries regional Study Area, where UK fleets predominantly target non-quota shellfish species, these quota transfers are not expected to substantially alter overall fishing patterns. It is possible that some vessels may seek additional quota-species opportunities, but this would depend on access to quota holdings and wider economic drivers.

58. Market changes, including demand in EU export markets for species such as brown crab, have the potential to influence which species are targeted and to what extent, through tariff and non-tariff barriers or shifts in consumer preferences. Nevertheless, the evidence from the 2011 to 2023 time series, combined with the strong local dependence on potting for shellfish, suggests that pot-based inshore fisheries are likely to remain the primary activity within the WDA and that demersal trawl, dredge and pelagic trawl fleets will continue to operate mainly outside the WDA but within the wider regional Study Area.

59. Overall, the future baseline for the purposes of this assessment is therefore taken to be represented by the recent 5-year average (2019 to 2023) in landings and spatial fishing patterns, set within the broader 2011 to 2023 trend context. This assumes continuation of existing fisheries management arrangements, ongoing market-driven variability and incremental adjustments in fleet behaviour, but no major structural change in fleet composition or target species beyond those already evident in the available datasets.

12.8.3 Data Limitations and Assumptions

60. Data limitations and uncertainties relevant to this assessment are described in Section 3.3 of **Appendix 12.1 Commercial Fisheries Technical Report** and are summarised as follows:

- Commercial landings data are generally robust due to the Registration of Buyers and Sellers legislation, but are constrained by the coarse spatial resolution of ICES rectangles and variable reporting for vessels under 10 m;
- VMS, AIS and EU Search and Rescue (SAR) datasets only represent larger vessels (typically ≥12-15 m) and therefore under-represent inshore activity;
- Marine traffic, scouting and plotter datasets provide valuable additional context but represent snapshots in time, selected fleets or partial spatial coverage; and
- Surveillance data are optimised for compliance rather than monitoring, so sightings are indicative rather than a complete record of fishing activity.

12.9 EMBEDDED MITIGATION

61. This section outlines the embedded mitigation relevant to the commercial fisheries assessment (as shown in **Table 12.6** below). Where additional mitigation measures are required to mitigate potentially significant effects (in EIA terms), these are detailed in the impact assessment.

Table 12.6 Embedded mitigation measures relevant to commercial fisheries

ID	Parameter	Description of Mitigation Measure	Securing Mechanism
M-4	Outline Environmental Management Plan	Development of, and adherence to, an Environmental Management Plan (EMP) which will be in accordance with an Outline EMP to be submitted with the Section 36 Application. The EMP will include measures to manage the environmental risks associated with the construction and operation of the offshore components of the Project.	Section 36 and marine licence consent conditions. Secured via **Appendix 6 Outline Environmental Management Plan**.

ID	Parameter	Description of Mitigation Measure	Securing Mechanism
M-5	Invasive Non-Native Species Management Plan	Development of, and adherence to, an Invasive Non-Native Species Management Plan (INNSMP). This plan will detail mitigation measures to reduce the introduction and transfer of invasive non-native species.	Section 36 and marine licence consent conditions. Secured via **Appendix 8 Invasive Non-Native Species Mitigation Plan**.
M-6	Piling Noise Mitigation Plan	Joint Nature Conservation Committee (JNCC) (2010) guidelines for minimising the risk of injury to marine mammals from piling noise and JNCC guidance for the use of PAM in UK waters for minimising the risk of injury to marine mammals from offshore activities are outlined in Section 4 of **Appendix 9 Draft Marine Mammal Mitigation Protocol (MMMP**) submitted with the application. A Piling Noise Mitigation Plan will be developed in the preconstruction phase in accordance with Section 4 of **Appendix 9 Draft MMMP**.	Section 36 and marine licence consent conditions. Secured via **Appendix 9 Draft MMMP** which sets out the requirements for a Piling Noise Mitigation Plan.
M-7	Marine Pollution Contingency Plan	Development of, and adherence to, a Marine Pollution Contingency Plan (MPCP). The MPCP will provide guidance to the Project personnel, contractors and subcontractors on the actions and reporting requirements in the event of spills and collision incidents. The MPCP will also contain emergency plans and mitigation procedures for a range of potential marine pollution incidents.	Section 36 and marine licence consent conditions. Secured via **Appendix 7 Marine Pollution Contingency Plan**.
M-8	Cable Plan	Development of, and adherence to, a Cable Plan (incorporating a Cable Burial Risk Assessment). The Cable Plan will confirm planned cable routeing, burial, and any additional external cable protection, and will set out methods for post-installation cable monitoring. Furthermore, this plan will detail environmental sensitives and design considerations to mitigate, as far as practicable, the effects of offshore cable laying and associated protection during installation and operation of the WDA infrastructure. The amount of cable protection utilised will be minimised where practicable; protection will be used only where design burial depths are not achievable or where crossings require it. Benthic ecology receptors will be considered in the drafting of the Cable Plan.	Section 36 and marine licence consent conditions. Secured via the requirement for a Cable Plan, to be developed and submitted to the Scottish Ministers for approval before commencement of construction.
M-10	Hierarchy of Unexploded Ordnance Clearance Methods	Development of an Unexploded Ordnance (UXO) Threat and Risk Assessment. The current hierarchy of UXO clearance techniques, in order of preference, are: • Avoid (through micro-siting); • Use a low-noise method to render the ordnance safe without requirement for	Will be secured via a UXO Threat Risk Assessment, which will be submitted as part of a separate Marine Licence application submission prior to construction.

ID	Parameter	Description of Mitigation Measure	Securing Mechanism
		detonation, e.g. laser cutting, mechanical removal if safe to do so; • Low-order clearance if above options not practicable; and • High-order clearance, if low-order clearance not possible, or in the unlikely event that low-order deflagration was unsuccessful.	
M-16	Fisheries Mitigation, Monitoring and Communication Plan	Development of, and adherence to, a Fisheries Mitigation, Monitoring and Communication Plan (FMMCP)). This will set out the means of liaising and co-existing with the commercial fishing industry through construction and Operation and Maintenance (O&M) phases of the WDA. The FMMCP includes detail on any mitigation measures to be put in place to limit effects on commercial fisheries activity and will be updated as the Project design is refined and as ongoing stakeholder consultation and feedback is received.	Section 36 and marine licence consent conditions. Secured via **Appendix 10 Fisheries Mitigation, Monitoring and Communication Plan**.
M-17	Fisheries Liaison Officer	Appointment of a Fisheries Liaison Officer (FLO) throughout the lifetime of the Project to ensure ongoing communication between the Project and commercial fisheries stakeholders.	Section 36 and marine licence consent conditions. Secured via **Appendix 10 Fisheries Mitigation, Monitoring and Communication Plan**.
M-18	Navigational Safety Plan	Development of, and adherence to, a Navigational Safety Plan (NSP). This plan will describe measures put in place related to navigational safety, including information on safety zones, charting, construction buoyage, temporary lighting and marking, and means of notification of activities associated with the WDA to other sea users.	Section 36 and marine licence consent conditions. Secured via **Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan**.
M-19	Notice to Mariners	Advanced warning and accurate location details of construction, maintenance and decommissioning operations, associated Safety Zones and advisory passing distances will be given via Notices to Mariners and Kingfisher webpage. All notices will be uploaded to the Project website (www.machairwind.com).	Included within NSP content which is a standard Section 36 and marine licence consent condition. An outline NSP has been provided in **Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan**.
M-20	Lighting and Marking Plan	Development of, and adherence to, a Lighting and Marking Plan (LMP). This plan will set out the marine and aviation navigational lighting and marking measures to be applied during the construction and operation of the WDA. This will be in accordance with **Appendix 12 Outline Lighting and Marking Plan**.	Section 36 and marine licence consent conditions. An outline LMP has been provided in **Appendix 12 Outline Lighting and Marking Plan**.
M-21	Best practice for fisheries engagement and managing interactions	Adherence to best practice guidance with regards to fisheries liaison and procedures in the event of interactions between the WDA and fishing activities, including Marine Directorate (2021) Guidance on claim for compensation for damage or loss of fishing	Section 36 and marine licence consent conditions. Secured via **Appendix 10 Fisheries Mitigation, Monitoring and Communication Plan**.

ID	Parameter	Description of Mitigation Measure	Securing Mechanism
		gear, loss of fishing time, or damage to vessel by suspected offshore renewable activity.	
M-22	Fisheries Liaison Group	A Fisheries Laison Group will be organised to encourage collaboration between the Project and fishing community and provide a forum to discuss shared issues, concerns, and suggestions to help inform the Project approach. Noting the confidential nature of some commercial fisheries information and areas of interest, one-to-one engagement will continue to be offered to fishers throughout the lifetime of the Project.	Section 36 and marine licence consent conditions. Secured via **Appendix 10 Fisheries Mitigation, Monitoring and Communication Plan**.
M-23	Safety Zones	Application for and use of Safety Zones of up to 500 m during construction, major repairs and decommissioning phases. Where appropriate, guard vessels will also be used to ensure adherence with Safety Zones or advisory passing distances, as defined by risk assessment, to mitigate any impact which poses a risk to surface navigation during construction, O&M and decommissioning phases. Such impacts may include partially installed structures or cables, extinguished navigation lights or other unmarked hazards. During O&M, there would be 500 m safety zones around any structure where major maintenance is ongoing.	Application submitted under Section 95 and Schedule 16 of the Energy Act 2004. Will also be referenced within the Navigational Safety Plan, secured under standard Section 36 and Marine Licence condition.
M-24	Dropped Objects	Dropped objects on the seabed during works associated with the WDA which may pose a hazard will be reported in line with the Marine Directorate - Licensing Operations Team procedures. Objects will be recovered where they pose a hazard to other marine users and where recovery is possible.	Section 36 and marine licence consent conditions. Secured via **Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan**.
M-25	Marking	All WDA infrastructure will be appropriately marked on the United Kingdom Hydrographic Office (UKHO) Admiralty Charts.	Provision of relevant information to UKHO required under standard marine licence conditions.
M-27	Emergency Response and Cooperation Plan	Development of, and adherence to, an Emergency Response and Cooperation Plan. This plan ensures co-operation with the Maritime and Coastguard Agency (MCA) by detailing the design parameters of the WDA, emergency contact details, and processes to be followed.	Section 36 and marine licence consent conditions. Secured via an Emergency Response and Cooperation Plan which will be developed and submitted prior to construction.
M-28	Guard Vessels	Where appropriate, guard vessels will be used to ensure adherence with Safety Zones (M-23) or advised safe working distances.	Section 36 and marine licence consent conditions. Secured via **Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan**.

ID	Parameter	Description of Mitigation Measure	Securing Mechanism
M-29	Marine Coordination Centre	A marine coordination centre will be implemented to manage Project vessels throughout construction, O&M and decommissioning.	Section 36 and marine licence consent conditions. Secured via **Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan**.
M-31	Vessel Marine Regulations	Compliance of all Project vessels with international Marine Regulations as adopted by the Flag State, notably Convention on International Regulations for Preventing Collisions at Sea (COLREGs) IMO, 1972/77) and International Convention for the Safety of Life at Sea (SOLAS) (IMO, 1974).	Section 36 and marine licence consent conditions. Secured via **Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan**. The Project will employ a dedicated competent resource to verify compliance with international Marine Regulations, including a Marine Operations Management Manual and a suite of Project documentation specific to Marine Operations.
M-32	Vessel Management Plan	Development of, and adherence to, a Vessel Management Plan. This plan will provide the procedures for management and coordination of vessels to mitigate the impact of Project vessels.	Required under standard Section 36 and marine licence consent conditions. An outline VMP has been provided in **Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan**.
M-34	Development Specification and Layout Plan	Development of, and adherence to, a Development Specification and Layout Plan. The layout of the WTGs will be finalised post consent. Consultation with the MCA and Northern Lighthouse Board (NLB) will be undertaken to ensure that the specific WTG layout is compatible with potential SAR activity (M-26).	Section 36 and marine licence consent conditions. Secured via the requirement for a Design Specification and Layout Plan, which will be submitted to Scottish Ministers for approval prior to the commencement of construction.
M-35	Failures of Lighting and Marking	Failures of the lighting and marking in the WDA will be appropriately reported and rectified as soon as practicable. Interim hazard warnings (i.e. Notice to Mariners (M-19)) or alternate temporary mitigation will be put in place as required. Associated communication procedures, including with the MCA and NLB will be included in the post-consent LMP (M-20).	Section 36 and marine licence consent conditions. Secured via **Appendix 12 Outline Lighting and Marking Plan**.
M-36	Site Navigation Marking	Marking and lighting of the site following consultation with NLB and in line with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Guidance G1162 (IALA, 2021) including a buoyed construction area.	Section 36 and marine licence consent conditions. Secured via **Appendix 12 Outline Lighting and Marking Plan**.
M-46	Decommissioning Programme	Development and adherence to a Decommissioning Programme. This programme will identify all the items of equipment, infrastructure and materials that have been installed or drilled and describes the decommissioning solution for each, whilst considering the potential environmental effects of each method alongside appropriate	Section 36 and marine licence consent conditions. Secured via a Decommissioning Programme, which will be developed and submitted to Scottish Ministers for approval before commencement of construction.

ID	Parameter	Description of Mitigation Measure	Securing Mechanism
		mitigation techniques that can be implemented.	

12.10 APPROACH TO ASSESSMENT

62. As noted above, this topic chapter considers the WDA Study Areas and existing environment only. A combined assessment of the construction, O&M and decommissioning of the WDA activities, Offshore ECC and OnTDA activities (commensurate with the level of detail that is available at the time of carrying out that appraisal) is also provided and the methodology for this is described in **Section 12.10.2**. This approach will ensure a holistic view is undertaken of the entire Project.

12.10.1 Windfarm Development Area-Alone

12.10.1.1 Methodology

63. **Chapter 5 EIA Methodology** provides a summary of the general impact assessment methodology applied in this WDA EIAR. The assessment uses the conceptual 'source-pathway-receptor' model. The model identifies potential impacts resulting from the proposed activities on the environment and sensitive receptors within it.

64. The characterisation of the existing environment helps to determine the receptor sensitivity to assess the potential impacts upon it.

65. Sensitivity is defined with regard to the ability of a receptor to adapt to change, tolerate, and/or recover from potential impacts. In addition, for some assessments the value of a receptor may also be an element to add to the assessment where relevant. The sensitivity of commercial fisheries activities to impacts associated with the WDA Infrastructure involves consideration of the importance of the receptor or activity, and the ability of the receptor or activity to accommodate the predicted change. The criteria for defining the sensitivity of a potential impact to commercial fishers and example indicators are provided in **Table 12.7**.

Table 12.7 Definition of sensitivity levels for commercial fisheries receptors and example indicators

Sensitivity	Definition	Example Indicators
High	• Receptor is highly vulnerable to impacts that may arise from the Project and recoverability is long term or not possible. And/or: No alternative fishing grounds are available.	• 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.
Medium	• Receptor is somewhat vulnerable to impacts that may arise from the Project and has moderate levels of recoverability. And/or: Moderate levels of alternative fishing grounds are available and/or fishing fleet has moderate operational range.	• Affected grounds contribute materially to seasonal activity in terms of availability of grounds targeted; • Some difficulty relocating effort without displacement or loss; and • Limited spatial mobility or operational constraints (e.g. gear type, vessel size).
Low	• Receptor is not generally vulnerable to impacts that may arise from the Project and /or has high recoverability.	• Area is not delineated or recognised as a regular fishing ground and accounts for only a small proportion of fleet effort;

Sensitivity	Definition	Example Indicators
	And/or: High levels of alternative fishing grounds are available and/or fishing fleet has large to extensive operational range; fishing fleet is adaptive and resilient to change.	• Similar grounds are accessible within normal operational range; and • Flexible gear use or target species.
Negligible	• Receptor is not vulnerable to impacts that may arise from the Project and /or has high recoverability. And/or: Extensive alternative fishing grounds available and/or fishing fleet is highly adaptive and resilient to change.	• No reliance on affected grounds; • Vessel(s) operate across multiple regions or grounds; and • Impacts are spatially or temporally insignificant to operations.

66. In terms of vulnerability and recoverability, the following additional context is provided:

- Vulnerability is the susceptibility of a receptor to experience the impact of a change in baseline conditions, e.g:
  - Very high vulnerability relates to a very high sensitivity: receptor cannot adapt, avoid or tolerate the impact; and
  - Very low vulnerability relates to a negligible sensitivity: receptor is highly likely to recover fully to levels not detectable against baseline.
- Recoverability is a measure of how well a receptor recovers following exposure to an effect, e.g.:
  - Very low recoverability relates to a very high sensitivity: receptor does not have the ability to recover, or recovery is long-term (e.g. greater than 12 years); and
  - Very high recoverability relates to a negligible sensitivity: receptor is highly likely to recover fully to levels not detectable against baseline.

67. The magnitude and probability of an impact occurring is established through consideration of:

- Scale or spatial extent (small scale to large scale or a few individuals to most of the population);
- Duration (short term to long term);
- Likelihood of impact occurring;
- Frequency; and
- Nature of change relative to the baseline.

68. Definitions of the magnitude levels and example indicators are given in **Table 12.8**.

Table 12.8 Definition of magnitude levels for commercial fisheries receptors and example indicators

Magnitude	Definition	Example Indicators
High	Impact is expected to result in one or more of the following: • Substantial loss of target fish or shellfish biological resource (e.g. loss of substantial proportion of resource within the WDA); and • Substantial loss of ability to carry on fishing activities (e.g. substantial loss of geographic extent due to the WDA); And/or Impact is of long-term duration (e.g. greater than 12 years duration) and/or is of extended physical extent.	• Affected area represents core or critical fishing ground; • High dependence confirmed through data and consultation; • Long-term or permanent reduction in activity anticipated; • No viable alternative grounds within operational range.

Magnitude	Definition	Example Indicators
Medium	Impact is expected to result in one or more of the following: • Partial loss of target fish or shellfish biological resource (e.g. moderate loss of resource within the WDA); and • Partial loss of ability to carry on fishing activities (e.g. moderate loss of geographic extent due to the WDA). And/or: Impact is of medium-term duration (e.g. less than 12 years) and/or is of moderate physical extent.	• Grounds contribute a significant and regular share of seasonal or annual income in terms of value; • Evidence of displacement pressures (e.g. competition, increased pressure on grounds, gear conflict); • Evidence, including from consultation, indicates moderate reliance or operational challenge in adapting.
Low	Impact is expected to result in one or more of the following: • Minor loss of target fish or shellfish biological resource (e.g. minor loss of resource within the WDA); and • Minor loss of ability to carry on fishing activities (e.g. minor loss of geographic extent due to the WDA). And/or: Impact is of short-term duration (e.g. less than 2 years) and/or is of limited physical extent. The short-term time period is based on professional judgement and is not definitive dependent on the nature of the impact.	• Affected grounds form a small portion of annual activity; • Consultation indicates low economic or operational dependence; • Displacement or resource loss can be offset within normal operating range.
Negligible	Fishing activity absent or minimal within affected area (as evidenced by baseline data and corroborated through industry consultation). And/or: Impact is expected to result in one or more of the following: • Slight loss of target fish or shellfish biological resource (e.g. slight loss of resource within the WDA); and • Slight loss of ability to carry on fishing activities (e.g. slight loss of fishing effort within the WDA). And/or: Impact is of very short-term duration (e.g. less than 1 year) and/or physical extent of impact is negligible and broadly undetectable from pre-development baseline conditions.	• Very low or no fishing activity recorded in the area; • Industry consultation confirms negligible operational reliance; • Any effect is short-lived and easily absorbed.

69. The EIA Regulations and associated guidance recognise the importance of defining the duration of impacts, through 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 International Energy Agency (IEA, 2023) and UK EIA guidelines (IEMA, 2004) recommend considering the temporal relevance of impacts in relation to a project's lifecycle.

70. In relation to commercial fisheries, the following timeframes are considered appropriate to the WDA:

- Short-term:
  - These are typically impacts that last for a relatively brief period, often in the range of 1 to 2 years; and
  - 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 to 12 years; and
  - 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 and could be permanent or only partially reversible within the human timescale; and
  - 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.

12.10.1.2 Significance of Effect

71. The potential significance of effect for a given impact is a function of the overall sensitivity and the magnitude of the impact (see **Chapter 5 EIA Methodology** for further details). A matrix is used (**Table 12.9**) as a framework to determine the significance of an effect. Definitions of each level of significance are provided in **Table 12.10**. Impacts and effects may be either positive (beneficial) or negative (adverse). Impacts of moderate significance and above are considered significant in EIA terms; impacts of minor and below are not significant in EIA terms.

72. In applying this methodology, professional judgement contributes to concluding significance of effects. This judgement draws on the assessor's technical expertise, knowledge of the receiving environment, and understanding of how similar developments have influenced comparable receptors. Judgement also considers the quality and confidence of the available data (**Section 12.8.3**), the level of uncertainty associated with predicted impacts, and any relevant guidance or industry standards. Professional judgement ensures that the matrix outputs are interpreted in context, allowing the assessor to account for site-specific conditions, receptor sensitivities that may cut across criteria, and the nature of the predicted changes. This approach ensures that the determination of significance is robust, transparent and proportionate.

Table 12.9 Significance of effect matrix

Sensitivity	Adverse Magnitude				Beneficial Magnitude			
	High	Medium	Low	Negligible	Negligible	Low	Medium	High
High	Major	Major	Moderate	Minor	Minor	Moderate	Major	Major
Medium	Major	Moderate	Minor	Negligible	Negligible	Minor	Moderate	Major
Low	Moderate	Minor	Minor	Negligible	Negligible	Minor	Minor	Moderate
Negligible	Minor	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Minor

Table 12.10 Definition of significance of effect

Significance of Effect	Definition
Major	Very large or large change in receptor condition, both adverse or beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving national, regional or local objectives, or could result in exceedance of statutory objectives and / or breaches of legislation.
Moderate	Intermediate change in receptor condition, which are likely to be important considerations at a local level.
Minor	Small change in receptor condition, which may be raised as local issues but are unlikely to be important in the decision-making process.
Negligible	No discernible change in receptor condition.
No Change	No effect, therefore, no change in receptor condition.

12.10.2 Combined Assessment: Windfarm Development Area, Offshore Export Cable Corridor and Onshore Development Transmission Development Area Methodology

73. This section presents how the Applicant will assess interactions between the WDA, Offshore ECC and OnTDA (i.e. considering impact interactions and additive effects to determine if any effects would be materially elevated from those assessed for the WDA-alone assessment). The approach enables potential interactions between each Development Area to be identified and assessed, ensuring a whole Project assessment is undertaken in a manner that is meaningful and proportionate. This is referred to as the combined assessment.

74. In this context, interactions are considered where there may be spatial overlap of effects and additive effects are considered where there may be incremental effects on the same receptor, including increased temporal effects.

75. Worst-case scenarios for all WDA infrastructure (which includes OSPs, OSP link cables and up to 200 km of the offshore export cable(s) which could be located within the WDA red line boundary) has been incorporated into the worst-case scenario for the WDA-alone assessment (**Table 12.5** and **Section 12.11.1**).

76. To inform the combined assessment, a set of assumptions were developed which includes a preliminary boundary for the Offshore ECC and OnTDA (connect point new Girvan, South Ayrshire), anticipated project components and associated construction methods and timelines. These are set out in **Chapter 3 Project Description**, Sections 3.7 and 3.8. Offshore and onshore engineering and environmental surveys enabling Offshore ECC and OnTDA corridor refinement are anticipated to take place after the WDA EIAR has been submitted to the consenting authorities.

77. Within the upcoming Offshore ECC and OnTDA consent applications, their respective scoping and EIARs will take account of all likely effects predicted within the WDA EIA and present updated combined assessments using the latest available information covering all aspects of the Project.

78. **Section 12.11.2** includes a qualitative discussion where potential interactions and additive effects between the WDA and the Offshore ECC and OnTDA have been identified, with the aim of determining whether effects could result in those of greater significance than assessed for the WDA-alone assessment. To accompany the description, a combined assessment summary table is provided. Only residual effects from the WDA-alone assessment are taken forward for consideration in the combined assessment.

12.10.3 Cumulative Effects Assessment Methodology

79. The Cumulative Effects Assessment (CEA) considers the impacts arising from the activities and infrastructure associated with the whole-Project (i.e. the WDA, Offshore ECC and OnTDA) as well as cumulatively with other relevant plans, projects and activities. The general approach to the CEA for commercial fisheries includes identifying potential cumulative effects, identifying a short list of plans and projects for consideration and evaluating the significance of cumulative effects. **Chapter 5 EIA Methodology** provides further details on the general approach to the CEA.

80. In line with the methodology set out in **Chapter 5 EIA Methodology**, the CEA is considered in two main stages with stage 1 split into two steps:

- **Stage 1a**: Screening of Potential Cumulative Impacts;
- **Stage 1b**: Screening of other plans, projects and activities; and
- **Stage 2:** CEA.

81. Stage 1a involves the screening / identification of which whole-Project impacts could have a cumulative effect with other plans, projects and activities (described as 'impact screening').

82. Stage 1b is the screening of other plans, projects and activities. In accordance with guidance documents discussed in **Chapter 5 EIA Methodology**, other plans or projects that are deemed likely to go ahead or are going ahead, and for which sufficient information is available to conduct a meaningful assessment, have been taken forward for consideration in **Appendix 5.1 Cumulative Projects Long and Short Lists**. If sufficient detail is not available, it is not possible to conduct a meaningful assessment of potential cumulative effects and therefore, these developments are not considered further. For the purposes of the CEA Long-List, the criteria of other plans or projects that are proposed for consideration include those which are 'reasonably foreseeable' such as those::

- Which have become operational since baseline data was collected;
- Under construction;
- Permitted application(s), but not yet implemented;
- Submitted application(s) not yet determined; and
- Plans and projects with design information in the public domain, including those that requested a Scoping Opinion up to six months prior to submission of the WDA application date as follows:
  - Projects in Scottish waters;
  - Projects in English, Welsh and Northern Irish waters, or other non-UK waters if considered to be relevant, have connectivity, or the potential for a cumulative effect;
  - Offshore wind projects granted an Option Agreement or Agreement for Lease; and
  - Non-wind projects.

83. The CEA Long-List has been developed based on the above criteria, and has been screened for each potential impact-receptor pathway using the following process:

- **Conceptual overlap**: an impact-receptor pathway describes an impact which has the potential to directly or indirectly affect the receptor(s) in question;
- **Physical overlap**: ability for impacts arising from the WDA, Offshore ECC and OnTDA to overlap with those from other plans or projects on a receptor basis. An overlap of the Zone of Influences (ZoIs) arising from the two (or more) projects/plans must be established for a cumulative effect to arise. There are exceptions to this for certain mobile receptors that are potentially subject to impacts from multiple plans or projects; and
- **Temporal overlap**: for a cumulative effect to arise from two or more plans or projects, a temporal overlap of impacts arising from each must be established. Some impacts are active only during certain phases of the WDA (e.g. piling noise during construction). However, the absence of a

strict overlap may not necessarily mean there is no potential for cumulative effect, as receptors may become further affected by additional, non-temporally overlapping projects.

84. Stage 2 is the assessment of cumulative effects. For the assessment stage, information has been gathered based on the CEA Long-List (**Appendix 5.1**) of plans or projects taken forward from the screening stage. A tiered approach is used to provide a framework for placing relative weight on the potential for each plan or project to be included in the CEA, based on the plan's or project's current stage of maturity, certainty in the design or effects and overall availability of detail on which to carry out an assessment. Projects or plans that will be assessed in Stage 2 will use the following tiers:

- Tier 1 assessment: projects which are operational (but not part of the baseline), under construction, those with consent and those projects where an application has been submitted but not yet determined;
- Tier 2 assessment: all plans/projects assessed under Tier 1, plus those projects with a Scoping Report and/or Scoping Opinion; and
- Tier 3 assessment: all plans/projects assessed under Tier 1 and Tier 2, plus those projects likely to come forward where a Crown Estate Scotland (CES) Option to Lease Agreement or equivalent has been granted (i.e., ScotWind and Innovation and Targeted Oil & Gas (INTOG) projects).

12.10.4 Transboundary Effects Assessment Methodology

85. The transboundary effect assessment considers the potential for effects to occur as a result of the WDA 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 EIA Methodology** provides further details on the approach to the transboundary effect assessment.

86. For commercial fisheries, the potential for transboundary effects has been identified in relation to potential displacement of fisheries activity into the Irish EEZ. This effect is considered for all phases of the Project under Impact 2: Displacement leading to gear conflict and/or increased fishing pressure, which includes displacement into other areas within the UK and Ireland EEZ.

12.11 ASSESSMENT OF SIGNIFICANCE

12.11.1 Windfarm Development Area-Alone Assessment of Significance

87. The potential effects on commercial fisheries receptors that may occur during construction, operation and decommissioning of the WDA are assessed in the following sections. The assessment follows the methodology set out in **Section 12.10.1** and is based on the realistic worst-case scenarios defined in **Section 12.7**. This assessment has been undertaken on the basis of all embedded mitigation measures outlined in **Table 12.6**. The embedded mitigation measures relevant for each impact are listed in the summary **Table 12.24**.

12.11.1.1 Impact 1: Reduction in Access to, or Exclusion from the WDA

88. Construction, operation and decommissioning of the WDA Infrastructure will introduce permanent and temporary exclusions or constraints on fishing within parts of the WDA. The WDA lies off the northwest of Islay and west of Colonsay and overlaps established shellfish potting grounds within ICES rectangles 40E3 and 41E3.

89. The inshore fleet operating from ports along the west coast of Scotland and the Inner Hebrides is dominated by small (<10 m) potting vessels targeting brown crab, lobster, velvet crab and nephrops. Landings statistics show that brown crab is the most valuable species in the local Study Area, with pots and traps delivering the highest landed value, confirming the economic importance of potting activity.

90. Spatial datasets (ScotMap, VMS, AIS, fisheries scouting) indicate moderate to high levels of potting activity across much of the WDA, while demersal otter trawl and dredge effort within the WDA is very limited and pelagic trawl activity is absent. Under-12 m diving, hooks/rod and line and set-net activity is negligible across the WDA.

91. During construction and decommissioning, safety zones around construction vessels, temporary works areas, anchor spreads and cable lay operations will restrict or preclude active fishing in parts of the WDA. In the operational phase, the physical presence of infrastructure, temporary Safety Zones and advised safe working distances around maintenance activities, together with any areas where fishers choose not to resume activity due to their own perception of risk will reduce access to established grounds.

12.11.1.1.1 Sensitivity

92. UK potting targeting crab and lobster: this receptor represents UK-registered potting fleets (largely Scottish vessels) targeting brown crab and lobster within ICES rectangles 40E3 and 41E3. Potting vessels are generally under 10 m in length, operating within 6 to 12 nm of the coast with limited capacity to relocate to alternative distant grounds due to steaming constraints, fuel costs and weather limitations. While some alternative grounds are available, these are already actively used and may be seasonally constrained. The dependency of local vessels on inshore potting grounds, the high economic value of the resource and limited operational range indicate that the receptor is generally vulnerable to changes in access but retains some flexibility to adjust effort. The sensitivity of the receptor is therefore considered to be **medium**.

93. Irish potting targeting crab and lobster: Irish-registered potting vessels occasionally operate within the wider regional Study Area but are not strongly dependent on the WDA. Irish fleets typically have larger, more mobile vessels with access to alternative grounds within and beyond the West of Scotland. The sensitivity of the receptor is therefore considered to be **low**.

94. UK potting targeting nephrops, whelk or ballan wrasse: nephrops, whelk and ballan wrasse support important but more spatially discrete fisheries in the region. These fleets are locally important and have limited range but have a somewhat lower dependency on the specific WDA footprint than the main crab/lobster fishery. The sensitivity of the receptor is therefore considered to be **medium**.

95. UK demersal otter trawl targeting nephrops, haddock and mixed demersal species, and UK scallop dredge targeting king scallop: demersal otter trawl and dredge activity within the local Study Area is largely focused outside the WDA. These vessels generally have a larger operating range and flexible grounds across the regional Study Area. The sensitivity of these receptors is therefore considered to be **low**.

96. UK commercial diving for shellfish, UK gear with hooks targeting mackerel and UK set nets for mixed demersal species: these gears are mainly deployed inshore, with negligible recorded activity across the WDA. They can be vulnerable to loss of access where overlaps occur, and this is amplified by the limited availability of alternative grounds and the preference for very specific fishing areas e.g., nearshore grounds. The sensitivity of these receptors is therefore considered to be **medium**.

97. UK and Non-UK pelagic trawl for mackerel, sprat and other pelagic species: pelagic trawl fleets follow migratory shoals of pelagic species over large areas. Effort is seasonal and no activity is recorded within the WDA. These fleets are highly mobile with extensive alternative grounds. The sensitivity of the receptor is therefore considered to be **low**.

12.11.1.1.2 Magnitude of Impact

12.11.1.1.2.1 Construction

98. Construction will involve installation of turbines, foundations, and inter-array cables, together with associated construction safety zones and anchor spreads. These activities will create short to medium term localised exclusion within parts of the WDA and temporary increases in vessel traffic and gear-interaction risks. For UK potting targeting crab and lobster, exclusion during construction will temporarily restrict access to established potting grounds where safety zones and construction activities are in place, causing a reduction in fishing opportunity. These areas include several grounds that were consistently identified by fishers during consultation as important and regularly worked. Spatial datasets, including landings statistics by ICES rectangle, VMS activity and ScotMER fishing-intensity mapping, corroborate this local knowledge and confirm the WDA contains productive and frequently used potting grounds.

99. While portions of the WDA are expected to remain accessible where no active construction is underway, temporary exclusion from established grounds during safety-zone periods will nonetheless constrain activity, particularly for the inshore potting fleet, which is characterised by strong dependence on local grounds and limited scope to relocate without loss of catch value. Although alternative areas exist, the economic value of these core grounds and the reliance of small inshore vessels on predictable, nearby fishing locations mean that construction-phase displacement is likely to reduce fishing opportunity. The magnitude of impact during construction for this receptor is therefore considered to be **medium**.

100. For all other receptors, overlap with the WDA is lower and alternative grounds are more readily available, so the magnitude of construction-phase exclusion is considered to be **low**. For UK and non-UK pelagic trawl, due to there being no recorded activity across the WDA throughout the time series analysed, the magnitude is considered to be **negligible**.

12.11.1.1.2.2 Operation and Maintenance

101. During the operational phase, permanent structures and any cable protection will create long-term and localized constraints on fishing in parts of the WDA. However, areas between turbines and outside maintenance safety zones and advised safe working distances will be available, and the indicative minimum turbine-to-turbine spacing within the array is 944 m, comparable to spacing used at other UK offshore windfarms where static gear activity has been able to resume between turbines where seabed conditions permit. For UK potting targeting crab and lobster the impact is long-term but spatially limited relative to the wider potting grounds and the magnitude is considered to be **low**.

102. For all other receptors the magnitude is considered to be **low** or, for pelagic trawl, **negligible**.

12.11.1.1.2.3 Decommissioning

103. Decommissioning activities are expected to be similar in character to construction, with temporary works areas and safety zones. As a precautionary worst-case, it is assumed that exclusion from parts of the WDA during decommissioning would be comparable to construction. For UK potting targeting crab and lobster the magnitude of impact during decommissioning is therefore considered to be **medium**. For the remaining receptors the magnitude is considered to be **negligible** for UK and non-UK pelagic and **low** for all other commercial fisheries fleets.

12.11.1.1.3 Significance of Effect

104. For UK potting targeting crab and lobster, sensitivity is medium and magnitude is medium during construction and decommissioning, giving effects of **moderate adverse** significance, which are

significant in EIA terms. During O&M, sensitivity remains medium but magnitude is low; the effect is therefore of **minor adverse** significance, which is **not significant** in EIA terms.

105. For Irish potting targeting crab and lobster, sensitivity is low and magnitude is low for all phases, leading to effects of **minor adverse** significance, which are **not significant** in EIA terms.

106. For UK potting targeting nephrops, whelk or ballan wrasse, sensitivity is medium and magnitude is low for all phases, resulting in effects of **minor adverse** significance, which are **not significant** in EIA terms.

107. For UK demersal otter trawl targeting nephrops, haddock and mixed demersal species and UK scallop dredge targeting king scallop, sensitivity is low and magnitude is low in all phases, so the effects are of **minor adverse** significance, which are **not significant** in EIA terms.

108. For UK commercial diving for shellfish, UK gear with hooks targeting mackerel and UK set nets for mixed demersal species, sensitivity is medium and magnitude is low across all phases, resulting in **minor adverse** effects, which are **not significant** in EIA terms.

109. For UK and Non-UK pelagic trawl for mackerel, sprat and other pelagic species, sensitivity is low and magnitude is negligible in all phases. The effect is therefore of **negligible** significance, which is **not significant** in EIA terms.

12.11.1.1.3.1 Additional Mitigation and Residual Effect

110. For UK potting targeting crab and lobster the following additional mitigation is proposed during the construction and decommissioning phases:

- Disruption Agreements will be implemented to coordinate and agree appropriate co-operation and establish evidence-based disruption payments to fishermen.

111. This additional mitigation, together with the embedded mitigation provided in **Table 12.6**, will be secured within the FMMCP.

112. With the adoption of additional mitigation, the magnitude of impact would be **low**. The residual effect is therefore of **minor adverse** significance, which is **not significant** in EIA terms.

113. The assessment of significance for Impact 1: Reduction in access to, or exclusion from the WDA is summarised in **Table 12.11**.

Table 12.11 Significance of effect for impact 1: Reduction in access to, or exclusion from the WDA

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
Construction	UK potting targeting crab and lobster	Medium	Medium	Moderate adverse	Disruption agreements	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
O&M	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
Decommissioning	UK potting targeting crab and lobster	Medium	Medium	Moderate adverse	Disruption agreements	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible

12.11.1.2 Impact 2: Displacement Leading to Gear Conflict and/or Increased Fishing Pressure

114. Reduction in access to parts of the WDA during construction and decommissioning may displace fishing activity into adjacent grounds. Displaced effort can increase competition within and between fleets, potentially increasing gear conflict and localised fishing pressure. During the operational phase, any long-term choice by skippers to avoid the WDA because of perceived hazards may similarly displace activity to surrounding grounds.

12.11.1.2.1 Sensitivity

115. Sensitivity to displacement and associated gear conflict is closely linked to dependence on local grounds and the availability of alternative fishing opportunities. As for Impact 1, UK potting targeting crab and lobster is the receptor most reliant on inshore grounds overlapping the WDA and is therefore considered to have **medium** sensitivity. Irish potting fleets, mobile demersal gears and pelagic trawlers have greater flexibility and lower dependence on the area and are therefore of **low** sensitivity. These ratings are adopted for all phases.

116. The sensitivity of UK potting targeting crab and lobster is therefore considered to be **medium**. The sensitivity of all other receptors considered under this impact is therefore considered to be **low**.

12.11.1.2.2 Magnitude of Impact

12.11.1.2.2.1 Construction and Decommissioning

117. For UK potting targeting crab and lobster, displacement from parts of the WDA is expected to create localised increases in effort and competition on nearby grounds, with an increased potential for spatial overlap with other potters and mobile gears. Given the moderate to high baseline use of the WDA by these fleets and the importance of adjacent inshore grounds, the magnitude is assessed as **medium** during construction and decommissioning.

118. For all other receptors, overlap with the WDA is substantially lower and alternative grounds are more readily available, so the magnitude of displacement is **negligible** for pelagic trawl and **low** for all other receptors.

12.11.1.2.2.2 Operation and Maintenance

119. During O&M, exclusion is less extensive and fishers will have time to adapt their patterns. Some displacement of potting effort may persist, but at a lower level than during active construction. The magnitude for UK crab/lobster potting is assessed as **low**; for all other receptors it is as assessed for construction and decommissioning i.e., **negligible** for pelagic trawl and **low** for all other receptors.

12.11.1.2.3 Significance of Effect

120. For UK potting targeting crab and lobster, sensitivity is medium and magnitude is medium during construction and decommissioning, so the effect is of **moderate adverse** significance, which is significant in EIA terms. During O&M, sensitivity is medium and magnitude is low so the effect is of **minor adverse** significance, which is **not significant** in EIA terms.

121. For all other receptors (Irish potting, nephrops/whelk/ballan potting, demersal otter trawl, scallop dredge, commercial diving, hooks, set nets), sensitivity ranges from low to medium while magnitude is low in all phases, resulting in **minor adverse** effects, which are **not significant** in EIA terms.

122. For UK and Non-UK pelagic trawl, sensitivity is low and magnitude is Negligible in all phases so the effect is of **negligible** significance, which is **not significant** in EIA terms.

12.11.1.2.3.1 Additional Mitigation and Residual Effect

123. For UK potting targeting crab and lobster the following additional mitigation is proposed for the construction and decommissioning phases:

- Disruption Agreements will be implemented to coordinate and agree appropriate co-operation and establish evidence-based disruption payments to fishermen.

124. This additional mitigation, together with the embedded mitigation provided in **Table 12.6**, will be secured within the FMMCP.

125. With the adoption of additional mitigation, the magnitude of impact would be **low**. The residual effect is therefore of **minor adverse** significance, which is **not significant** in EIA terms.

126. The assessment of significance for Impact 2: Displacement leading to gear conflict and/or increased fishing pressure is summarised in **Table 12.12**.

Table 12.12 Significance of effect for impact 2: Displacement leading to gear conflict and/or increased fishing pressure

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
Construction	UK potting targeting crab and lobster	Medium	Medium	Moderate adverse	Disruption agreements	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
O&M	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
Decommissioning	UK potting targeting crab and lobster	Medium	Medium	Moderate adverse	Disruption agreements	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Negligible	Negligible		Negligible

12.11.1.3 Impact 3: Displacement or Disruption of Commercial Resources

127. Project activities (for example noise, vessel presence and seabed disturbance) could alter the distribution of commercially important fish and shellfish resources, leading to reduced catch rates or shifts in stock distribution that affect fisheries. For the WDA Infrastructure, these potential ecological changes have been assessed in detail within the Fish and Shellfish Ecology assessment; the commercial fisheries assessment considers the consequences for fishing fleets in relation to resource availability.

12.11.1.3.1 Sensitivity

128. All commercial fishing fleets are sensitive to changes in the distribution or availability of their target species. For the WDA, medium sensitivity is assigned only to the main potting fleets (UK crab/lobster potting and UK potting for nephrops, whelk or ballan wrasse), reflecting their relatively higher dependency on inshore shellfish resources. Irish potting, demersal otter trawl, dredge, hooks, nets and pelagic trawl receptors are assigned low sensitivity, recognising their capacity to adapt to natural variability and to redistribute effort within the wider regional Study Area.

129. The sensitivity of UK potting targeting crab and lobster and UK potting targeting nephrops, whelk or ballan wrasse is therefore considered to be **medium**. The sensitivity of all other receptors considered under this impact is therefore considered to be **low**.

12.11.1.3.2 Magnitude of Impact

12.11.1.3.2.1 Construction and Decommissioning

130. Given the limited overlap between the WDA and key demersal and pelagic grounds, and the localised nature of construction-related disturbance, any displacement of target resources is expected to be small compared to natural variability in stock distribution and fishing patterns.

131. For all receptors, the magnitude of impact is assessed as **low**. This reflects the limited overlap between the WDA and key demersal or pelagic target grounds, the expectation that any construction or decommissioning related disturbance will be spatially and temporally constrained relative to the scale of fish stocks, and the ability of fleets to adapt to modest, localised changes in catch rates by adjusting tow locations or pot placement.

12.11.1.3.2.2 Operation and Maintenance

132. For the operation phase, the magnitude of impact for all receptors is assessed as low. This reflects that operational disturbance, including electromagnetic fields (EMFs) from energised cables, low-level noise and vibration from turbines, and changes to seabed and water-column habitat associated with the physical presence of infrastructure, is expected to be minimal in scale and spatially limited. Some localised changes in species diversity may occur in the immediate footprint of foundations and subsea structures as a result of colonisation and the creation of hard substrate habitat; however, these changes are not anticipated to result in any notable alteration to overall abundance or species composition within the WDA, particularly for key commercial species such as crab and lobster. Consequently, while minor shifts in local habitat conditions may occur, these are not expected to influence the viability of potting activity or materially affect wider stock distribution, and the resulting operational-phase impact remains **low.**

12.11.1.3.3 Significance of Effect

133. For UK potting targeting crab and lobster and UK potting targeting nephrops, whelk or ballan wrasse, sensitivity is medium and magnitude is low for all phases, leading to effects of **minor adverse** significance, which are **not significant** in EIA terms.

134. For Irish potting, demersal otter trawl, scallop dredge, commercial diving, hooks, set nets and UK and Non-UK pelagic trawl, sensitivity is low and magnitude is low, giving effects of **minor adverse** significance, which are **not significant** in EIA terms.

135. The assessment of significance for Impact 3: Displacement or disruption of commercial resources is summarised in **Table 12.13**.

Table 12.13 Significance of effect for impact 3: Displacement or disruption of commercial resources

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
Construction	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
O&M	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
Decommissioning	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Low	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Medium	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Medium	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse

12.11.1.4 Impact 4: Increased Project Vessel Traffic Leading to Interference

136. Construction, operation and decommissioning will involve increased vessel traffic within and around the WDA. Construction and decommissioning phases will see the highest intensity of vessel movements associated with installation and removal of turbines, foundations and cables, while the operational phase will involve regular service and maintenance vessel transits. Interactions with fishing vessels could include temporary obstruction of tows or shooting/hauling patterns, increased transit traffic through adjacent fishing grounds and potential for Project related vessels to interfere with set fishing gear (e.g., sever buoys).

12.11.1.4.1 Sensitivity

137. A **medium** sensitivity is assigned for UK and Irish potting fleets targeting crab and lobster, UK potting for nephrops, whelk or ballan wrasse and UK set nets, reflecting the requirement for gear to be left in situ, with vessels returning to haul gear after a period of soak time; together with their dependence on local inshore grounds. Other fleets (demersal otter trawl, scallop dredge, commercial diving, hooks) are assigned **low or negligible** (pelagic trawl) sensitivity, recognising their higher mobility, limited overlap with the WDA and that gear is not left in situ to fish, but continuously attached to the fishing vessel.

12.11.1.4.2 Magnitude of Impact

12.11.1.4.2.1 Construction and Decommissioning

138. Vessel movements related to the construction of the Project (i.e. construction vessels transiting to and from areas undergoing construction works) would add to the existing level of shipping activity in the regional Study Area (see **Chapter 13 Shipping and Navigation** for a full assessment of additional vessel movements). Project vessels will be present at higher densities within the WDA, and some will need to maintain restricted manoeuvrability. This will occasionally interrupt preferred tow lines or shooting/hauling patterns where fishing occurs close to installation sites or along vessel transit routes. However, interference will be short-term and localised, with project vessels able to coordinate movements through the fisheries liaison framework and Notices to Mariners. Fishing vessels can generally avoid construction spread areas on a day-to-day basis. For the more sensitive static fleets (UK/Irish potting, UK set nets) the magnitude is assessed as **low**; for other fleets, the magnitude is **low** or, for pelagic trawl, **negligible**.

12.11.1.4.2.2 Operation and Maintenance

139. During the operational phase, vessel traffic reduces to routine maintenance and inspection activities with occasional heavy-lift campaigns. Transits will typically follow defined routes which will be set out in the Vessel Management Plan and mobilisations can be communicated in advance. Fishing vessels are accustomed to sharing grounds with other commercial and service traffic. Interference is therefore expected to be limited and intermittent for all fleets, with magnitude **low or negligible**.

12.11.1.4.3 Significance of Effect

140. For UK and Irish potting fleets, UK potting targeting nephrops, whelk or ballan wrasse and UK set nets, sensitivity is medium and magnitude is low in all phases, resulting in effects of **minor adverse** significance, which are **not significant** in EIA terms.

141. For UK demersal otter trawl, scallop dredge, commercial diving and hooks, sensitivity is low and magnitude is low in all phases, resulting in effects of **minor adverse** significance, which are **not significant** in EIA terms.

142. For UK and Non-UK pelagic trawl, sensitivity is negligible and magnitude is low, resulting in effects of **negligible** significance, which are **not significant** in EIA terms.

143. The assessment of significance for Impact 4: Increased Project vessel traffic leading to interference is summarised in **Table 12.14**.

Table 12.14 Significance of effect for impact 4: Increased Project vessel traffic leading to interference

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
Construction	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Medium	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Low	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Low	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible	Low	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible	Low	Negligible		Negligible
O&M	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Medium	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Low	Low	Minor adverse		Minor adverse

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
	UK gear with hooks targeting mackerel	Low	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible	Low	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible	Low	Negligible		Negligible
Decommissioning	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Medium	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Low	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Low	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Low	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible	Low	Negligible		Negligible
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible	Low	Negligible		Negligible

12.11.1.5 Impact 5: Gear Snagging Leading to Loss of Earnings

144. The presence of subsea infrastructure, particularly inter-array cables and any associated cable protection such as rock placement or concrete mattresses, can introduce snagging hazards for certain gear types. Static gears (pots, nets) and towed gears (demersal trawls, dredges) may be at risk of entanglement or damage if deployed over or near exposed or poorly-buried infrastructure, leading to gear loss, repair costs and lost fishing time.

145. For the WDA Infrastructure, it is assumed that inter-array cables, OSP link cables and export cables within the WDA will be buried where practicable and that any cable protection will be minimised and appropriately charted, consistent with standard industry practice and relevant guidance.

12.11.1.5.1 Sensitivity

146. **Medium** sensitivity is assigned to UK and Irish potting targeting crab and lobster, UK potting targeting nephrops, whelk or ballan wrasse, UK scallop dredge and UK set nets. These gears are in direct and prolonged contact with the seabed and can be difficult or costly to replace, and some are locally important to small-scale fleets.

147. **Low** sensitivity is assigned to UK demersal otter trawl, UK commercial diving and UK gear with hooks targeting mackerel, recognising partial exposure to snagging but greater ability to avoid hazards or relocate.

148. **Low** sensitivity is also assigned to UK and Non-UK pelagic trawl, which operate in midwater and have very limited direct interaction with seabed infrastructure.

12.11.1.5.2 Magnitude of Impact

12.11.1.5.2.1 All phases

149. For all receptors and phases, the magnitude of impact is assessed as **low**. This reflects the commitment for burial of cables as the preferred means of protection, and where burial is not possible, cable protection will be designed with a view to minimising interactions with fishing gear where possible. The intention is to facilitate resumption of fishing and minimise snagging risk, while acknowledging the localised footprint of any cable protection relative to the wider fishing grounds, and the ability of skippers, once infrastructure is installed and charted, to avoid known snagging hotspots. Although construction and decommissioning phases involve additional temporary obstructions, these are short-term and managed through liaison and notice procedures.

12.11.1.5.3 Significance of Effect

150. For UK and Irish potting targeting crab and lobster, UK potting targeting nephrops, whelk or ballan wrasse, UK scallop dredge and UK set nets, sensitivity is medium and magnitude is low across all phases, resulting in effects of **minor adverse** significance, which are **not significant** in EIA terms.

151. For UK demersal otter trawl targeting nephrops, haddock and mixed demersal species, UK commercial diving for shellfish and UK gear with hooks targeting mackerel, sensitivity is low and magnitude is low across all phases, resulting in effects of **minor adverse** significance, which are **not significant** in EIA terms.

152. For UK and Non-UK pelagic trawl for mackerel, sprat and other pelagic species, sensitivity is low and magnitude is low, resulting in effects of **minor adverse** significance, which are **not significant** in EIA terms.

153. The assessment of significance for Impact 5: Gear snagging leading to loss of earnings is summarised in **Table 12.15.**

Table 12.15 Significance of effect for impact 5: Gear snagging leading to loss of earnings

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
Construction	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Medium	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Medium	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Low	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Low	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
O&M	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Medium	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Medium	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Low	Low	Minor adverse		Minor adverse

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
	UK gear with hooks targeting mackerel	Low	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
Decommissioning	UK potting targeting crab and lobster	Medium	Low	Minor adverse	None beyond embedded mitigation	Minor adverse
	Irish potting targeting crab and lobster	Medium	Low	Minor adverse		Minor adverse
	UK potting targeting nephrops, whelk or ballan wrasse	Medium	Low	Minor adverse		Minor adverse
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Low	Low	Minor adverse		Minor adverse
	UK scallop dredge targeting king scallop	Medium	Low	Minor adverse		Minor adverse
	UK commercial diving for shellfish	Low	Low	Minor adverse		Minor adverse
	UK gear with hooks targeting mackerel	Low	Low	Minor adverse		Minor adverse
	UK set nets for mixed demersal species	Medium	Low	Minor adverse		Minor adverse
	UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Low	Low	Minor adverse		Minor adverse

12.11.2 Combined Assessment: Windfarm Development Area, Offshore Export Cable Corridor and Onshore Development Transmission Development Area

12.11.2.1 Impact 1: Reduction in Access to, or Exclusion from the WDA and Offshore Export Cable Corridor

154. The combined footprint of the WDA and the Offshore ECC interacts with a wider range of fishing activity than the WDA alone. While the WDA overlaps principally with local potting grounds and only very limited demersal otter trawl and dredge effort, the Offshore ECC crosses established demersal otter trawl grounds, including nephrops trawl effort to the east of Islay and Jura, and significant scallop dredging intensity inshore of Islay and along the approaches to the landfall.

155. Stakeholder engagement has highlighted particular concern from demersal otter trawl and scallop dredge fleets about temporary loss of key tows, routeing of the export cable through well-used grounds and the risk that any residual cable protection could constrain future towing patterns.

156. The Onshore Transmission Development Area is located above Mean High Water Springs and does not introduce additional interactions with commercial sea fisheries.

157. Sensitivities for each receptor are therefore considered to remain as described for the WDA-only assessment, but the addition of the Offshore ECC increases the spatial overlap and potential magnitude of effect for demersal otter trawl and scallop dredge fleets during cable installation and decommissioning.

158. For access and exclusion, the combined assessment indicates that potting fleets (particularly UK vessels targeting crab and lobster) remain the receptors most affected within the WDA, where moderate to high densities of pots are recorded across much of the array area. The Offshore ECC introduces additional, albeit linear, areas of temporary exclusion along the cable route where safety zones and guard vessels will preclude both static and mobile gears during installation and decommissioning.

159. Demersal otter trawl effort is concentrated on muddy nephrops grounds to the east of Islay and Jura, with the Offshore ECC running through or adjacent to parts of these higher-intensity cells, while scallop dredge efforts are particularly evident inshore of Islay and around the southern area where the corridor makes landfall. As such, although the assessed sensitivities remain unchanged, the magnitude of temporary loss of access for demersal otter trawl and scallop dredge fleets is higher along the Offshore ECC than within the WDA. Short-term construction and decommissioning works along the corridor are therefore expected to cause more noticeable but still time-limited disruption to these fleets, with the potential to approach the upper end of the **low** or lower end of the **medium** magnitude range where the route overlaps the most heavily used tows. The likely impacts from the Offshore ECC, which does not form part of the consenting applications which this EIAR supports, will be considered in detail within a future Offshore ECC EIA and relevant mitigation measures will be identified at that time.

12.11.2.2 Impact 2: Displacement Leading to Gear Conflict and/or Increased Fishing Pressure

160. When the WDA and Offshore ECC are considered together, displacement effects remain driven primarily by temporary construction and decommissioning activities. Within the WDA, displacement of local potting fleets into adjacent grounds has the potential to increase intra-fleet competition but can be accommodated within nearby inshore areas. The Offshore ECC introduces additional displacement of mobile demersal fleets and scallop dredgers from their preferred tows along the cable route, particularly in the nearshore zone where space is more limited and trawl and dredge intensity is highest. This creates a greater potential for short-term heightened interaction where displaced dredgers and demersal otter trawlers interact with each other and with static gears (e.g.

pots and nets) within the local Study Area. While the overall availability of alternative grounds within the regional Study Area, and the ability of larger mobile vessels to redistribute effort, should avoid sustained increases in regional fishing pressure, the combined assessment highlights that the magnitude of displacement and associated gear-interaction risk for demersal otter trawl and scallop dredge fleets along the Offshore ECC could be greater than that assessed for the WDA alone. The likely impacts from the Offshore ECC, which does not form part of the consenting applications which this EIAR supports, will be considered in detail within a future Offshore ECC EIA and relevant mitigation measures will be identified at that time.

12.11.2.3 Impact 3: Displacement or Disruption of Commercial Resources

161. The combined WDA and Offshore ECC footprint increases the spatial extent of seabed disturbance (for example temporary increases in suspended sediment during cable trenching and localised habitat disturbance) relative to the WDA alone, but this remains small in the context of the wider demersal and shellfish stocks exploited in the regional Study Area. Disturbance along the cable corridor will be transient and linear, and although demersal otter trawl and scallop dredge fleets may experience short-term reductions in catch rates where localised stocks temporarily redistribute away from active working areas, these effects are expected to be within the range of natural variability in stock distribution and fishing success. The combined assessment concludes that the magnitude of resource-level disruption remains low for all receptors, with no change to sensitivities.

12.11.2.4 Impact 4: Increased Project Vessel Traffic Leading to Interference

162. Inclusion of the Offshore ECC increases the length of shipping and construction corridors associated with the Project, particularly during cable installation when cable-lay vessels, support craft and guard vessels will operate between the WDA and landfall. This will temporarily add traffic to routes also used by demersal otter trawlers and scallop dredgers approaching or leaving key ports on the west coast of Scotland and Northern Ireland, and could intermittently interfere with the timing and orientation of tows or the shooting and hauling of static gear near the corridor. However, these interactions are expected to be highly localised and of short duration at any one location as installation progresses along the route. During O&M, vessel movements associated with cable inspection or repair will be infrequent compared to baseline commercial traffic. With continued implementation of a FLO, advance notification of activities where possible, adherence to agreed transit corridors and guard vessel protocols, the combined assessment concludes that the magnitude of interference remains low for all receptors, with no change to sensitivity classifications and no requirement for additional project-specific mitigation beyond the measures already proposed as embedded.

12.11.2.5 Impact 5: Gear Snagging Leading to Loss of Earnings

163. The risk of gear snagging is inherently greater when subsea infrastructure extends beyond the WDA into more intensively fished demersal otter trawl and scallop dredge grounds along the Offshore ECC. While the array cables within the WDA mainly interact with static gear fleets, the export cable route passes through areas where bottom-towed gears are routinely worked, and stakeholder feedback indicates strong concern that poorly buried or inadequately marked cables could create long-term hazards to trawl doors, warps and dredges. Sensitivities for potting, trawl and dredge receptors therefore remain as previously assessed, but the combined assessment recognises that the potential magnitude of snagging risk for demersal otter trawl and scallop dredge fleets is higher along the Offshore ECC than within the WDA. To ensure that effects remain of low magnitude, additional emphasis is placed on mitigation for the transmission assets, including routeing of the final export cable alignment to maximise burial potential; limiting the extent of rock placement and other hard cable protection, particularly within intensively towed corridors; adherence to industry best

practice for cable burial and post-lay inspection; early and clear charting of the as-laid route and any cable protection; and provision of an effective gear-loss and damage claims process as part of the FMMCP. With these measures in place, and on the basis that fishing activity (including demersal otter trawl and scallop dredge) is expected to resume along the majority of the cable once burial is verified, the combined WDA and Offshore ECC effects on snagging risk are anticipated to remain **minor** and **not significant** in EIA terms.

12.11.2.6 Combined Assessment Summary

164. A summary for the combined assessment for effects on commercial fisheries related to the WDA and Offshore ECC is provided in **Table 12.16**.

Table 12.16 Commercial fisheries combined assessment summary

Receptor/Topic	WDA Residual Effect	Offshore ECC Appraisal of Effects	OnTDA Appraisal of Effects	Combined Assessment
C Impact 1: Reduction in access to, or exclusion from the WDA	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely, although additional mitigation may be required for UK potting, UK scallop dredge and UK demersal trawl due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.
C Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely, although additional mitigation may be required for UK potting, UK scallop dredge and UK demersal trawl due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.
C Impact 3: Displacement or disruption of commercial resources	Not Significant (Minor Adverse).	Not Significant (Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
C Impact 4: Increased Project vessel traffic leading to interference	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
C Impact 5: Gear snagging leading to loss of earnings	Not Significant (Minor Adverse).	Not Significant (Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
O&M Impact 1: Reduction in access to, or exclusion from the WDA	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.

Receptor/Topic	WDA Residual Effect	Offshore ECC Appraisal of Effects	OnTDA Appraisal of Effects	Combined Assessment
O&M Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
O&M Impact 3: Displacement or disruption of commercial resources	Not Significant (Minor Adverse).	Not Significant (Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
O&M Impact 4: Increased Project vessel traffic leading to interference	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
O&M Impact 5: Gear snagging leading to loss of earnings	Not Significant (Minor Adverse).	Not Significant (Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
D Impact 1: Reduction in access to, or exclusion from the WDA	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely, although additional mitigation may be required for UK potting, UK scallop dredge and UK demersal trawl due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.
D Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely, although additional mitigation may be required for UK potting, UK scallop dredge and UK demersal trawl due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.
D Impact 3: Displacement or disruption of commercial resources	Not Significant (Minor Adverse).	Not Significant (Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.
D Impact 4: Increased Project vessel traffic leading to interference	Not Significant (Negligible to Minor Adverse).	Not Significant (Negligible to Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.

Receptor/Topic	WDA Residual Effect	Offshore ECC Appraisal of Effects	OnTDA Appraisal of Effects	Combined Assessment
D Impact 5: Gear snagging leading to loss of earnings	Not Significant (Minor Adverse).	Not Significant (Minor Adverse).	N/A – no pathway to receptors.	No significant residual effects likely.

12.12 CUMULATIVE EFFECTS

12.12.1 Screening of Potential Cumulative Impacts

165. The first step in the CEA is the screening / identification of which whole-Project impacts could have a cumulative effect with other plans, projects and activities (described as 'impact screening'). This information is set out in **Table 12.17**, together with a consideration of the confidence in the data that is available to inform a detailed assessment and the associated rationale.

Table 12.17 Potential cumulative impacts (impact screening)

Impact	Potential for Cumulative Impact	Data Confidence	Rationale
Construction			
Impact 1: Reduction in access to, or exclusion from the WDA	Yes	Medium	Temporary construction-related exclusion may interact with other regional offshore developments or marine activities, potentially compounding access constraints.
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Yes	Medium	Construction-driven displacement could combine with displacement from other ongoing developments, leading to localised increases in fishing density and risk of gear conflict.
Impact 3: Displacement or disruption of commercial resources	Yes	Low - Medium	Localised disturbance to target species may overlap with similar pressures from other projects, though effects remain spatially limited.
Impact 4: Increased Project vessel traffic leading to interference	No	High	Vessel activity will increase locally but will not materially contribute to cumulative vessel-density impacts regionally.
Impact 5: Gear snagging leading to loss of earnings	No	High	Gear-interaction risk is localised and not additive across developments.
Operation and Maintenance			
Impact 1: Reduction in access to, or exclusion from the WDA	Yes	High	Long-term spatial occupation by multiple offshore windfarms may collectively reduce available fishing grounds.
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Yes	Medium	Operational displacement may combine with displacement from other windfarms, increasing fishing density in remaining grounds.
Impact 3: Displacement or disruption of commercial resources	Yes	Low - Medium	Habitat modification and operational disturbance are low-intensity but could combine regionally,

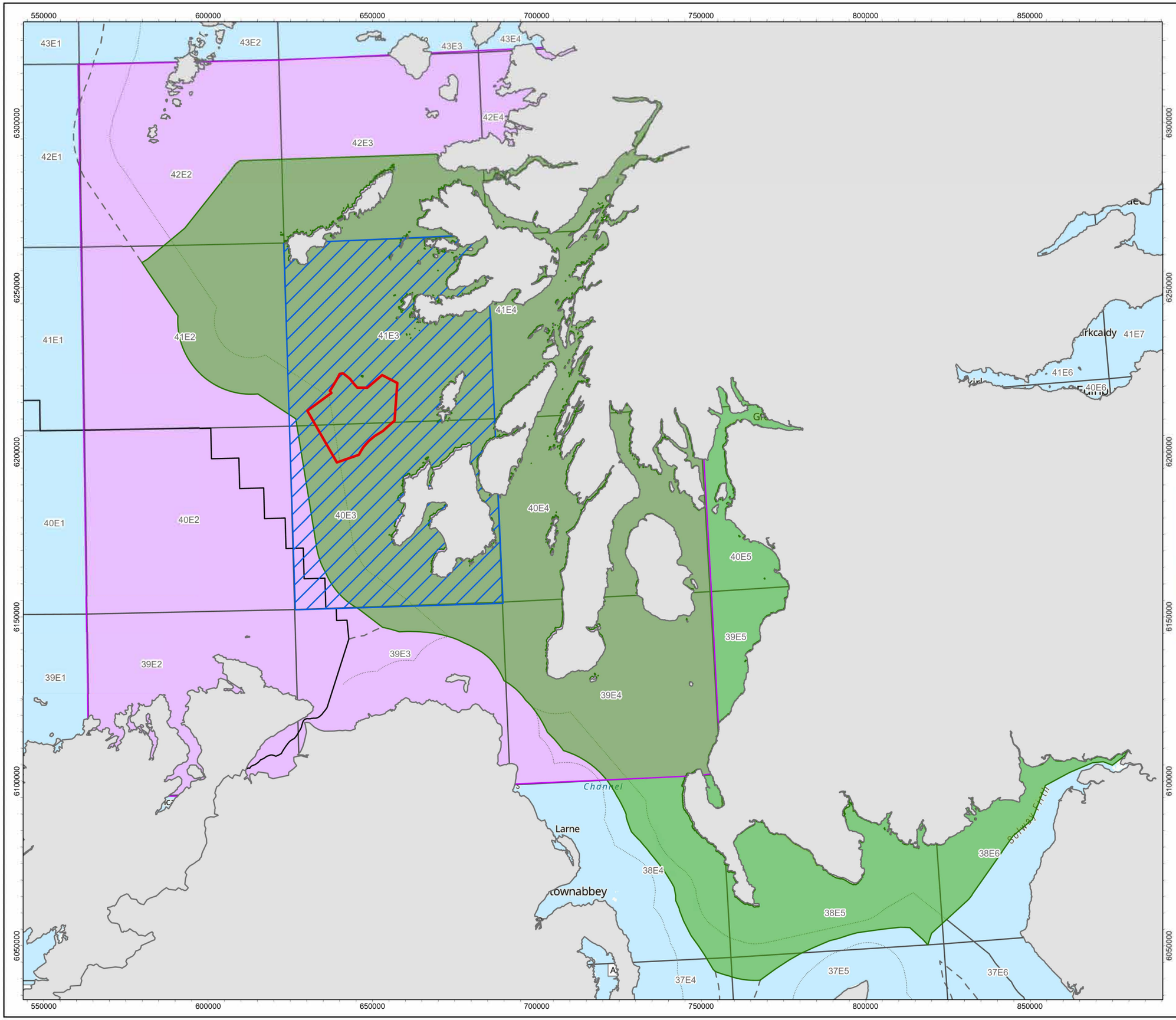
Impact	Potential for Cumulative Impact	Data Confidence	Rationale
			though evidence indicates low likelihood of measurable effects.
Impact 4: Increased Project vessel traffic leading to interference	No	High	O&M vessel traffic is low frequency and predictable, not materially adding to cumulative vessel activity.
Impact 5: Gear snagging leading to loss of earnings	No	High	Seabed infrastructure is stable and monitored, reducing cumulative snagging potential.
Decommissioning			
Impact 1: Reduction in access to, or exclusion from the WDA	Yes	Medium	Short-term exclusion may interact with other marine construction campaigns.
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Yes	Low - Medium	Displacement may combine with other temporary activities, though overall cumulative duration is short.
Impact 3: Displacement or disruption of commercial resources	Yes	Low	Temporary seabed disturbance may overlap with other works, though biological cumulative effects remain unlikely.
Impact 4: Increased Project vessel traffic leading to interference	No	High	Vessel activity during decommissioning is short-term and unlikely to overlap regionally.
Impact 5: Gear snagging leading to loss of earnings	No	High	Risk is project-specific and short duration, limiting cumulative potential.

12.12.2 Screening of Other Plans, Projects and Activities

166. The second screening step in the CEA is the identification of the other plans, projects and activities that may result in cumulative impacts for inclusion in the CEA (described as 'project screening'). This information is set out in **Table 12.18,** together with consideration of the relevant details of each, including current status (e.g. under construction), planned construction period, closest distance to the Project, status of available data and rationale for including or excluding from the assessment.

167. The Project screening has been informed by the development of a CEA Long List (**Appendix 5.1**) which forms an exhaustive list of plans, projects and activities in a very large Study Area. The list has been appraised, based on the confidence in being able to undertake an assessment from the information and data available, enabling individual plans, projects and activities to be screened in or out. As described in **Section 12.10.3**, this has been undertaken using a tiered approach to provide a framework for placing relative weight on the potential for each plan or project to be included in the CEA for this topic.

168. The CEA zone of influence for commercial fisheries is the area within the SWCRIFG, as shown in **Figure 12.2**. The SWCRIFG extends from north of Coll to the Solway Firth; and extends out to the 12 nm boundary of Scottish territorial waters. To ensure a comprehensive and appropriate CEA Study Area for the commercial fisheries assessed, other plans and projects located west of the SECRIFG (i.e., beyond the Scottish 12 nm boundary) are included within the assessment. The projects included in the CEA are presented in **Figure 12.3**.



Windfarm Development Area
ICES Statistical Rectangles
Local Study Area
Regional Study Area
South West Coast RIFG
6 nm Boundary
12 NM Territorial Sea Boundary
UK-Ireland EEZ

REV	REV DATE	GIS CREATOR	GIS REVIEWER	TECHNICAL CHECKER	TECHNICAL APPROVER
1	01/05/2024	FN	SM	CB	PB

DRAWING NUMBER: MCW-DWF-ENV-MAP-RHS-000143

DATUM	ETRS89	PROJECTION	UTM Zone 29N
SCALE	1:1,100,000	PAGE SIZE	A3

PROJECT TITLE: MachairWind

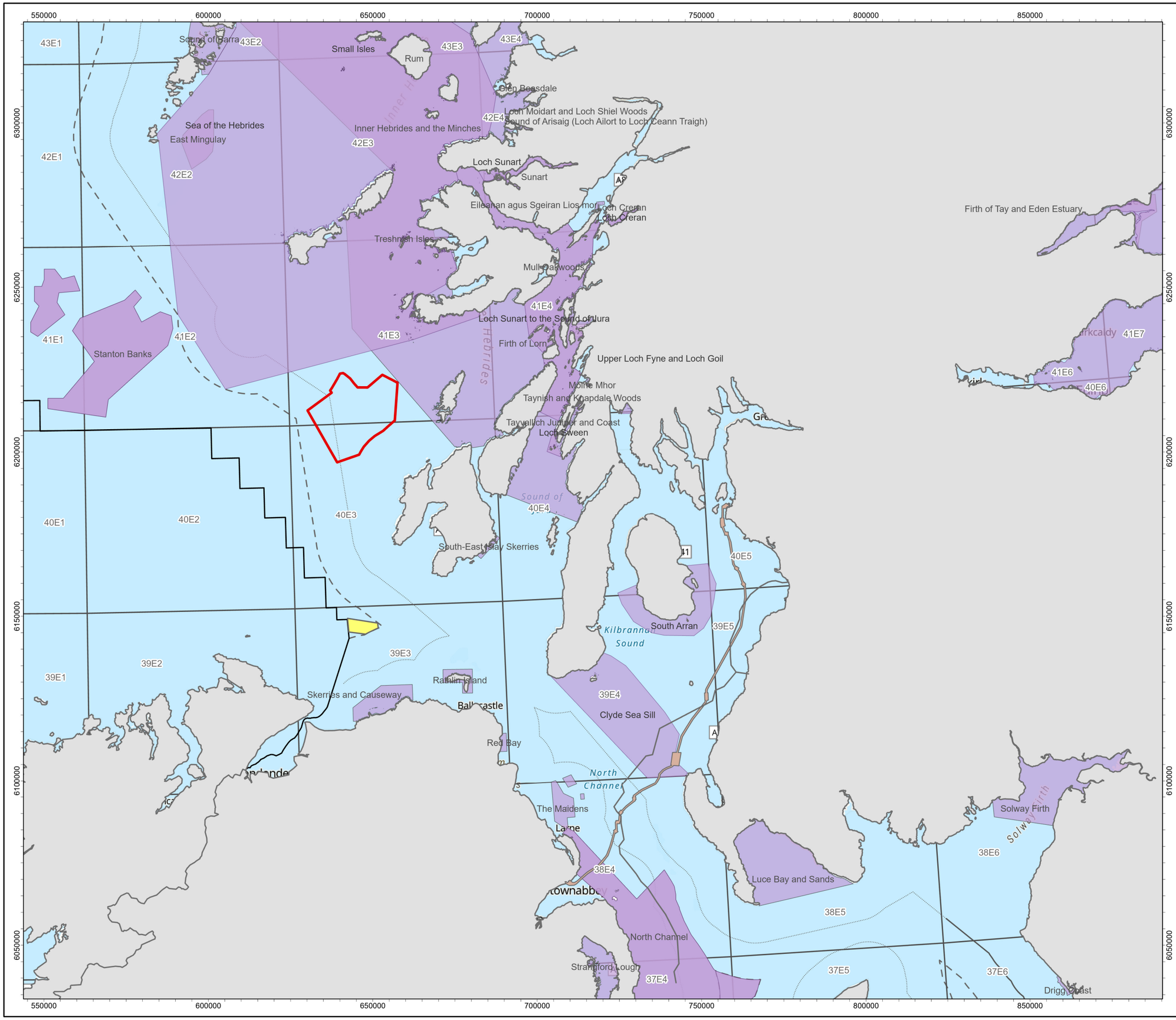
Figure 12.2 Commercial Fisheries Study Areas and South West Coast Regional Inshore Fishery Group

NOT TO BE USED FOR NAVIGATION

nima CONSULTANTS

ScottishPower Renewables

Project: D:\Projects 2024\1027 MachairWind\CEA\CEA2.aprx
Name: MCH_ETRS89_UTM29N_A3_Landscape_Template_Contractor_Consultant



Windfarm Development Area
ICES Statistical Rectangles
6 nm Boundary
12 NM Territorial Sea Boundary
UK-Ireland EEZ
Marine Protected Areas
Malin Sea Wind
Subsea Cables

REV	REV DATE	GIS CREATOR	GIS REVIEWER	TECHNICAL CHECKER	TECHNICAL APPROVER
1	01/05/2024	FN	SM	CB	PB

DRAWING NUMBER	MCW-GEN-GIS-MAP-NIM-000074		
DATUM	ETRS89	PROJECTION	UTM Zone 29N
SCALE	1:1,100,000	PAGE SIZE	A3
PROJECT TITLE	MachairWind		

Figure 12.3: Projects and Plans included in the Commercial Fisheries CEA

NOT TO BE USED FOR NAVIGATION

nima CONSULTANTS

ScottishPower Renewables

Table 12.18 Planned projects within the commercial fisheries zone of influence

Project / Plan	Status	Closest Distance from the WDA (km)	Closest Distance from the Offshore ECC (km)	Description of Project / Plan	Construction Period	Operational Period	Data Confidence	Overlap with the WDA	Included in the CEA	Rationale
Tier 1 projects / plans (projects which are operational (but not part of the baseline), under construction, those with consent and submitted but not yet determined)										
Portnahaven	Operational	23 km	4 km	Aggregates and Dredge Disposal	N/A	2020 onwards	High	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Port Ellen	Operational	37 km	11 km	Aggregates and Dredge Disposal	N/A	2020 onwards	High	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Campbeltown	Operational	79 km	12 km	Aggregates and Dredge Disposal	N/A	2020 onwards	High	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Flex Marine Power	Consented	26 km	37 km	Tidal	2024 to 2029	2030 onwards	High	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Dubh Artach Lighthouse	Operational	1.5 km	28 km	Lighthouse refurbishment	2030 to 20232	2032 onwards	High	N/A	No	Refurbishment of the lighthouse has no conceptual or physical overlap with fisheries
Tier 2 projects / plans (all plans/projects assessed under Tier 1, plus those projects with a Scoping Report and/or Scoping Opinion)										
Measures specified within the Firth of Lorn SAC Conservation and Management Advice	Designated	32 km	68 km	MPA	N/A	N/A	High - medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Measures specified within the Inner Hebrides and the Minches SAC Conservation and Management Advice	Designated	0 km	32 km	MPA	N/A	N/A	High - medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Measures specified within the South-East Islay Skerries SAC Conservation and Management Advice	Designated	39 km	15 km	MPA	N/A	N/A	High - medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Measures specified within the Stanton Banks SAC (offshore) Conservation and Management Advice	Designated	43 km	65 km	MPA	N/A	N/A	High - medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Measures specified within the Treshnish Isles SAC Conservation and Management Advice	Designated	35 km	70 km	MPA	N/A	N/A	High - medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Further 18 mPAs >45km from WDA	Designated	45 – 202 km	18 - 170 km	MPA	N/A	N/A	High - medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)

Project / Plan	Status	Closest Distance from the WDA (km)	Closest Distance from the Offshore ECC (km)	Description of Project / Plan	Construction Period	Operational Period	Data Confidence	Overlap with the WDA	Included in the CEA	Rationale
LirIC Interconnector	In planning	125 km	Overlaps ECC	Subsea HVDC Interconnector	2032	2032 onward	Medium	Potential for spatial and temporal overlap with Offshore ECC	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species) as the Offshore ECC
Tier 3 projects / plans (all plans/projects assessed under Tier 1 and Tier 2, plus those projects likely to come forward where a CES Option to Lease Agreement or equivalent has been granted (i.e., ScotWind and INTOG projects)										
Malin Sea Wind	Concept / early planning	48km	14km	Offshore Windfarm	2030-2035	2038 onwards	Medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Oran na Mara	Concept / early planning	24km	38km	Tidal	Unknown	Unknown	Medium	Conceptual and temporal overlap	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species)
Western Link 2	In planning	Approx. 120 km	Overlaps ECC	Subsea HVDC Interconnector	TBC	TBC	Low	Potential for spatial and temporal overlap with Offshore ECC	Yes	The effects happen at the same time and may affect the same receptor/resource (e.g., same fishery or target species) as the Offshore ECC

12.12.3 Cumulative Effects Assessment

169. This Cumulative Effects Assessment (CEA) considers whether the Project could act in-combination with other relevant projects/plans (split across Tiers 1 to 3) to generate additional effects on commercial fisheries receptors, beyond those identified for the Project alone.

170. The WDA-alone assessment identified significant effects only for potting fleets targeting crab and lobster as a result of reduced access within the WDA and associated displacement effects. With embedded mitigation measures, including delivery of the FMMCP and additional mitigation measures in the form of disruption agreements; the residual effects are assessed as **not significant**. No other significant effects were identified for the remaining commercial fisheries receptors for the WDA alone.

171. In addition, some receptors may be affected in the vicinity of the Offshore ECC. No significant residual effects are anticipated, although additional mitigation may be required for UK potting, UK scallop dredge, and UK demersal otter trawl due to effects localised around the Offshore ECC.

12.12.3.1 Cumulative Impact 1: Reduction in Access to, or Exclusion from, the WDA

172. Reduction in access/exclusion can arise where safety zones, advised safe working distances, construction activities or vessel movements constrain fishing activity. The cumulative assessment considers whether other projects/plans could materially increase the spatial/temporal extent or intensity of reduced access, thereby increasing the magnitude of effect for relevant receptors.

12.12.3.1.1 Tier 1: All phases

173. Portnahaven, Port Ellen and Campbeltown dredge disposal sites (operational): These are established, operational dredge disposal activities with ongoing use. Interaction with commercial fishing is typically localised, intermittent, and temporary (during disposal events and associated vessel movements). Effects are generally managed through standard marine communications and navigational practices (e.g., notifications and adherence to established procedures), and any direct disruption is expected to be short-term and spatially limited. Given the small footprint and transient nature of the activities, no meaningful cumulative increase in access restrictions is anticipated for any fisheries receptor. Overall cumulative significance: **minor adverse** significance, which is **not significant** in EIA terms.

174. Flex Marine Power (consented tidal project): Flex Marine Power's Sound of Islay project is described as a single 50 kW tidal turbine, installed in the Sound of Islay, with clearly defined installation phases and a small spatial footprint. The turbine is mid-water column with specified surface clearance, and operation will be marked via a virtual Aid to Navigation (AIS-based) rather than physical markers. The developer indicates that installation activities are time-limited and weather-dependent, with works vessels present in the immediate vicinity during installation periods. (Flex Marine Power, 2024).

175. Given the demonstration-scale nature of the project and its highly localised interaction area, it is not anticipated to materially increase cumulative access restriction beyond the Project's effects. Overall cumulative significance: **minor adverse** significance, which is **not significant** in EIA terms.

176. Tier 1 conclusion (all phases): Taking account of the limited footprints and/or transient nature of Tier 1 activities, the cumulative effect on access/exclusion is assessed as **minor adverse** (**not significant**) for all commercial fisheries receptors.

12.12.3.1.2 Tier 2: All phases

177. Tier 2 includes relevant designated sites (Special Areas of Conservation (SACs)/MPAs) that overlap conceptually and temporally with the Project and could influence fishing activity through existing or future management measures. For commercial fisheries, the primary cumulative pathway is whether

management measures materially increase spatial constraint on fishing grounds and therefore compound the Project's access/exclusion effects.

178. Firth of Lorn SAC (Annex I reefs): NatureScot's Conservation and Management Advice confirms the SAC is designated to protect reefs and notes existing conservation measures, including fisheries restrictions under the Loch Sunart to the Sound of Jura Marine Conservation Order (2016). The advice describes prohibitions for several demersal mobile gears and certain passive gears, while explicitly excluding creels/parlour creels from the definition of "passive gear" in that context. NatureScot's management advice also indicates existing management for demersal mobile gear and provides advice for static gear interactions with reef features. (NatureScot, 2025a).

179. Implications for cumulative access: management measures are principally relevant to mobile demersal gears and netting-type passive gears, with limited relevance to potting/creeling as practised by crab/lobster fleets. Therefore, no material cumulative increase in access restriction is predicted for potting fleets attributable to this designation/management when considered alongside the Project.

180. Inner Hebrides and the Minches SAC (harbour porpoise): NatureScot confirms this SAC is designated to protect harbour porpoise (*Phocoena phocoena)* and provides advice for activities that may affect the feature. (NatureScot, 2024).

181. While porpoise-related management can influence certain activities (e.g., through mitigation expectations for disturbance/noise-generating works), it does not inherently create broad, permanent fishing exclusions for potting fleets. Consequently, no meaningful cumulative increase in access restriction for the key potting receptors is anticipated from this designation in-combination with the Project.

182. South-East Islay Skerries SAC (harbour seal): NatureScot's advice confirms the protected feature is harbour seal (*Phoca vitulina)* and identifies management advice regarding fisheries interactions. The advice includes recommendations to reduce or limit pressures associated with the use of nets due to entanglement risk, while also noting that creel fishing is widespread in the site and is considered a low-risk pathway for harbour seals (with entanglement occurrence described as rare). (NatureScot, 2025b).

183. Implications for cumulative access: any management emphasis is more likely to relate to netting rather than potting and therefore does not materially increase cumulative access constraint for the key potting receptors.

184. Stanton Banks SAC (offshore reefs): Joint Nature Conservation Committee's (JNCC's) site information notes that, as of 16 October 2025, new fisheries measures would be in force for Stanton Banks SAC, with demersal mobile gear prohibited from three zoned areas, and points users to Scottish Government guidance on coordinates and restrictions.

185. JNCC also indicates that its formal conservation advice for the site was last updated in March 2018. (JNCC, 2018).

186. Scottish Government guidance (September 2025) describes the measures introduced by the Offshore Fishing (Prohibition of Fishing Methods) (Scotland) Order 2025, stating that measures come into effect 16 October 2025. (Scottish Government, 2025).

187. Implications for cumulative access: these measures principally affect demersal mobile gear and are geographically defined. They do not materially increase access restriction for potting receptors, and the site is also relatively distant compared with the Project's primary interaction footprint.

188. Treshnish Isles SAC (grey seal; reefs as qualifying feature): JNCC identifies grey seal *(Halichoerus grypus)* as the primary Annex II feature for selection and notes reefs as a qualifying Annex I habitat feature.

189. Implications for cumulative access: as with other SACs, the designation itself does not automatically equate to fishing exclusion; any management measures would be gear- and location-specific. No material cumulative increase in access restriction for potting fleets is predicted in-combination with the Project.

190. Further MPAs >45 km from the WDA: Given their separation distances and the localised nature of the Project's access effects, these additional designated sites are not expected to create a pathway for meaningful cumulative access restriction for local fisheries receptors in the context of this assessment.

191. The LirIC Interconnector, a proposed subsea cable connecting the Belfast region in Northern Ireland and the Ayrshire region in Scotland, is included in the Tier 2 cumulative assessment. Construction of the Offshore ECC may overlap spatially and temporally with construction of the LirIC Interconnector, resulting in the potential for cumulative effects on commercial fisheries within areas of overlap. This may temporarily reduce access to fishing grounds and disrupt mobile and static gear activity, including scallop dredges, demersal trawls and pots/creels, where construction working areas, safety zones and vessel activity overlap with fishing activity.

192. However, due to the linear and progressive nature of subsea cable installation, any restriction to fishing activity would be temporary and localised. The combined construction footprint is therefore not expected to result in a materially greater loss of access for commercial fisheries than the Offshore ECC alone. Any effects would be managed through project-specific mitigation, including fisheries liaison and, where practicable, measures to facilitate the removal or relocation of static gear prior to construction.

193. During operation, no surface-piercing infrastructure would be present. However, cable crossing protection may be required and could locally constrain the use of certain gear types, particularly scallop dredges, within the overlap area. Demersal trawls and pots/creels are expected to resume activity, and any operational effects on commercial fisheries would be localised and managed at the individual project level.

194. Tier 2 conclusion (all phases): Tier 2 designations and associated management advice/measures predominantly relate to mobile demersal gears and some netting pressures, with limited constraint on potting. In addition, overlap with the LirIC Interconnector may give rise to localised and temporary disruption to fishing activity during construction, and localised operational constraints for certain gear types where cable crossing protection is required. However, these effects would be limited in extent and managed through project-specific mitigation. Accordingly, the cumulative effect on access/exclusion for all commercial fisheries receptors is assessed as **minor adverse** significance, which is **not significant** in EIA terms.

12.12.3.1.3 Tier 3: All phases

195. Tier 3 includes projects in concept/early planning that may come forward during overlapping timeframes.

196. Malin Sea Wind (concept/early planning; INTOG): Malin Sea Wind is described as an INTOG innovation project delivering 100 mW of floating offshore wind capacity, located between Islay and the north coast of Northern Ireland, with the array lying approximately 23 km southeast of Islay and spanning 32 km². (Malin Sea Wind, 2024).

197. Based on its location and the early-stage nature of the project, and considering the Project's primary access constraints are localised to the WDA/Offshore ECC, Malin Sea Wind is not expected to materially increase cumulative access restriction for local potting fleets operating from Islay and surrounding islands (noting that fleet-range considerations are addressed in the Project's baseline and stakeholder evidence). No cumulative significant effect is predicted.

198. Oran na Mara (concept/early planning; INTOG tidal): CES reports signing an option agreement with Nova Innovation, which planned a 3 mW tidal array off Islay as part of the Oran na Mara project. (Crown Estate Scotland, 2021).

199. Given the small scale relative to the Project and the uncertainty on timing, the in-combination effect on access/exclusion is expected to remain minor and localised.

200. The Western Link 2, a proposed subsea cable connecting Ayrshire in Scotland and Wales, is included in the Tier 3 cumulative assessment. Similarly to the LirIC Interconnector (assessed in Tier 2), construction of Western Link 2 may overlap spatially and temporally with construction of the Offshore ECC, giving rise to the potential for cumulative effects on commercial fisheries within areas of overlap. As for the LirIC Interconnector, effects may include temporary reductions in access to fishing grounds and disruption to mobile and static gear activity, including scallop dredges, demersal trawls and pots/creels.

201. However, as with the LirIC Interconnector, the linear and progressive nature of subsea cable installation means that effects would be temporary and localised, and the combined construction footprint is not expected to result in a materially greater loss of access than the Offshore ECC alone. Any effects would be managed through project-specific mitigation, including fisheries liaison and, where practicable, measures to facilitate the removal or relocation of static gear prior to construction.

202. During operation, and similarly to the LirIC Interconnector, no surface-piercing infrastructure would be present. Any cable crossing protection may, however, locally constrain the use of certain gear types, particularly scallop dredges, within the overlap area. Demersal trawls and pots/creels are expected to resume activity, and any operational effects would be localised and managed at the individual project level.

203. Tier 3 conclusion (all phases): On the basis of scale, location and current project maturity, Tier 3 projects are not expected to materially increase access/exclusion effects for the fisheries receptors. Cumulative significance: **minor adverse** significance, which is **not significant** in EIA terms.

12.12.3.2 Impact 2: Displacement Leading to Gear Conflict and/or Increased Fishing Pressure

204. Displacement can occur where exclusion or reduced access pushes vessels into alternative grounds, potentially increasing local fishing pressure and/or gear conflict (including between mobile and static gears, or between different static-gear fleets).

12.12.3.2.1 Tier 1: All phases

205. No cumulative displacement is predicted because Tier 1 activities are either highly localised and intermittent (dredge disposal operations) or small footprint/demonstration-scale (Flex Marine Power). The spatial and temporal extent of additional access constraint is insufficient to generate measurable displacement beyond the Project's assessed effect. Overall cumulative significance: **minor adverse** significance, which is **not significant** in EIA terms.

12.12.3.2.2 Tier 2: All phases

206. No cumulative displacement is predicted because Tier 2 mPAs/SACs do not introduce broad additional constraints on the key potting receptors; where fisheries measures apply, they are generally directed at demersal mobile gears and/or certain netting interactions, rather than creeling. The LirIC Interconnector is also included within the Tier 2 cumulative assessment; however, due to the linear and progressive nature of subsea cable construction, any overlap in construction activity would result in only temporary and localised access restrictions. During operation, any constraints associated with cable crossing protection would also be localised and are not expected to give rise to a meaningful redistribution of fishing effort or increased gear conflict. Therefore, the Project is not

expected to combine with Tier 2 measures to create additional displacement pathways leading to gear conflict or increased fishing pressure. Overall cumulative significance: **minor adverse** significance, which is **not significant** in EIA terms.

12.12.3.2.3 Tier 3: All phases

207. No cumulative displacement is predicted because Tier 3 projects are at concept/early planning stage and, on current information, are not expected to overlap with the Project in a manner that meaningfully increases effective exclusion for the key receptors. Western Link 2 is included within the Tier 3 cumulative assessment and, similarly to the LirIC Interconnector, any construction-related interaction with the Offshore ECC would be temporary and localised due to the linear nature of subsea cable installation. Any operational constraints associated with cable protection would likewise be localised and are not expected to displace fishing activity to an extent that would increase gear conflict or fishing pressure. Overall cumulative significance: **minor adverse** significance, which is **not significant** in EIA terms.

12.12.3.3 Impact 3: Displacement or Disruption of Commercial Resources

208. This pathway considers whether in-combination effects could reduce availability of target species (e.g., crab, lobster, nephrops, scallops, pelagic fish) through habitat/resource impacts, indirect ecological change, or changes in exploitation patterns.

209. Across all tiers and phases, the projects/plans considered in this CEA do not create a credible mechanism for cumulative population-level effects on commercial stocks that would be attributable to the Project in-combination with other activities. The primary cumulative pathways remain focused on access/exclusion and displacement, rather than stock/resource change. Accordingly, no cumulative effect on commercial resources is predicted for any receptor, and significance is assessed as **minor adverse** significance, which is **not significant** in EIA terms.

12.13 TRANSBOUNDARY EFFECTS

210. Transboundary effects arise when impacts from a development within one EEA State affects the environment of another EEA State(s).

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

212. Effects on biological resources could occur over a range of ten to 100s of kilometres from the Project and could therefore interact with Ireland, as the only EEA state within this distance. Based on the minor residual significance of disruption to commercial species during all phases of the Project, it is expected that the impact on stocks in the Irish EEZ will be negligible (**not significant**). 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 **minor adverse** significance, which is **not significant** in EIA terms.

213. Effects on commercial fishing fleets could occur over a range of 100s of kilometres from the WDA (affecting fleets from other states that operate in the vicinity of the WDA) and could therefore interact

with the following EEA states: Ireland, other EU Member States 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 assessment of significance and cumulative effects assessment.

12.14 INTER-RELATED AND INTERACTING IMPACTS

12.14.1 Inter-Relationships

214. **Table 12.19** below provides a summary of the key inter-relationships between commercial fisheries and other technical chapters and indicates where those issues have been addressed in the relevant chapters.

Table 12.19 Commercial fisheries inter-relationships

Topic and description	Related chapter(s)	Where addressed in this chapter	Rationale
All phases			
Effects of changes to fish ecology on fisheries: Changes to fish distribution, abundance, or behaviour due to underwater noise, vibration, EMF, or habitat disturbance may affect target species and fishing success.	Chapter 9 Fish (Including Basking Shark) and Shellfish	Sections describing Impact 3: Displacement or disruption of commercial resources.	Fish ecology findings directly inform assessment of fisheries impacts, since effects on fish stocks or habitats translate into socio-economic and operational impacts on fishers. The fish and shellfish ecology assessment concluded negligible to minor significance, informing corresponding commercial fisheries conclusions.
Underwater noise, vibration, and seabed disturbance: Physical pressures influencing fish and shellfish resources and indirectly affecting fishing grounds.	Chapter 9 Fish (Including Basking Shark) and Shellfish	Sections describing Impact 3: Displacement or disruption of commercial resources.	Disturbance to benthic habitats and target species affects the availability and quality of fishing grounds: • The commercial fisheries assessment relies on the fish ecology chapter to establish biological linkages between project activities and resource changes.
Vessel traffic, navigation safety, and collision risks: Increased vessel activity from construction, O&M, and decommissioning phases may interfere with fishing operations and access.	Chapter 13 Shipping and Navigation	Discussed in Impact 4: Increased Project vessel traffic leading to interference and cross-referenced in embedded mitigation measures.	Vessel traffic, navigation safety, and collision risks: • Increased vessel activity from construction, O&M, and decommissioning phases may interfere with fishing operations and access.
Safety Zones, lighting and marking of structures: Safety and visibility measures influence navigational safety for fishers and potential spatial displacement.	Chapter 13 Shipping and Navigation	Embedded mitigation measures including Safety Zones, LMP, and Vessel Management and Navigational Safety Plan (VMNSP).	Safety Zones, lighting, and marking of structures: • Safety and visibility measures influence navigational safety for fishers and potential spatial displacement.

Topic and description	Related chapter(s)	Where addressed in this chapter	Rationale
Cumulative spatial and operational impacts: Combined loss of fishing grounds from multiple offshore developments and MPA management measures.	Chapter 9 Fish (Including Basking Shark) and Shellfish Chapter 18 Socio-economics	Discussed in **Section 12.12**: Cumulative Effects	Cumulative spatial and operational impacts: • Combined loss of fishing grounds from offshore developments and MPA management measures.
Gear snagging and seabed obstruction risk: Interaction between fishing gear and subsea infrastructure (cables, anchors).	Chapter 13 Shipping and Navigation	Addressed in Impact 5: Gear snagging leading to loss of earnings; snagging risk assessed jointly with navigation safety concerns.	Gear snagging and seabed obstruction risk: • Interaction between fishing gear and subsea infrastructure (cables, cable protection, structures).
Socio-economic effects on commercial fisheries: Potential effects on costs, profitability, and local supply chain activity arising from temporary disruption, reduced access, or changes to operating patterns during construction and O&M.	Chapter 18 Socio-economics	Cross-referenced where commercial fisheries impacts are described in economic terms (e.g., displacement/interference, loss of access, gear loss risk) and within cumulative effects where socio-economic receptors are considered.	The commercial fisheries assessment identifies the mechanisms of effect (e.g., displacement, interference, gear risk), while the socio-economics chapter provides the framework and evidence for translating these mechanisms into potential economic effects for affected fisheries and associated businesses/communities.

12.14.2 Interactions

215. The impacts identified and assessed in this chapter have the potential to interact with each other. Areas of potential interaction between impacts are presented in **Table 12.20, Table 12.21**, and **Table** 12.22 below. The impacts are assessed relative to each development phase (i.e. construction, O&M or decommissioning) to see if (for example) multiple construction impacts affecting the same receptor could increase the magnitude of impact upon that receptor.

216. The interactions identified in this section may give rise to socio-economic consequences for commercial fisheries (e.g., changes to costs, earnings and operational efficiency), which are assessed in **Chapter 18 Socio-economics**.

217. A subsequent lifetime assessment has been undertaken which considers the impact interactions identified and the potential for impacts to effect receptors relevant to this chapter across all development phases (**Table 12.23**).

Table 12.20 Potential interaction between impacts – construction

Potential Interactions Between Construction Impacts					
	Impact 1: Reduction in access to, or exclusion from the WDA	**Impact 2: Displacement leading to gear conflict and/or increased fishing pressure**	**Impact 3: Displacement or disruption of commercial resources**	**Impact 4: Increased Project vessel traffic leading to interference**	**Impact 5: Gear snagging leading to loss of earnings**
Impact 1: Reduction in access to, or exclusion from the WDA	N/A	Yes. Reduced access to fishing grounds displaces vessels, increasing effort and competition on adjacent areas.	Yes. Loss of fishing grounds may displace effort into areas where disturbed fish/shellfish resources are less available, compounding displacement.	Yes. Restricted access coincides with increased Project related vessel presence, increasing navigational interference.	Yes. Displaced effort may increase operations near WDA boundaries where snagging risk exists.
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Yes. Driven by loss of access (Impact 1).	N/A	Yes. Increased fishing pressure on adjacent grounds may coincide with areas affected by fish disturbance.	Yes. Displaced fleets may encounter greater vessel traffic when navigating around construction zones.	Yes. Redistributed effort heightens interaction risk with Windfarm Infrastructure.
Impact 3: Displacement or disruption of commercial resources	Yes. Disturbance outside the WDA can further limit catch opportunities for displaced fishers.	Yes. Resource disturbance on adjacent fishing grounds exacerbates gear conflict and pressure.	N/A	Yes. Resource movement and WDA related vessel activity combine to disrupt fishing operations.	Indirect. Changes in resources may draw fishers closer to WDA, increasing snagging risk.
Impact 4: Increased Project vessel traffic leading to interference	Yes. May further restrict ability to fish within or near the WDA.	Yes. Vessel movements can disrupt newly concentrated fleets in adjacent areas.	Yes. Propeller wash and noise add to fish and shellfish disturbance.	N/A	Yes. Increased traffic increases entanglement or gear loss risk.
Impact 5: Gear snagging leading to loss of earnings	Yes. Restricted fishing space forces operations closer to infrastructure.	Yes. Displaced effort heightens interaction risk with subsea structures.	Yes. Changes in resources may attract fishing towards areas of higher snagging hazard.	Yes. Vessel movements increase entanglement risk.	N/A

Table 12.21 Potential interactions between impacts – operation and maintenance

Potential Interactions Between O&M Impacts					
	Impact 1: Reduction in access to, or exclusion from the WDA	**Impact 2: Displacement leading to gear conflict and/or increased fishing pressure**	**Impact 3: Displacement or disruption of commercial resources**	**Impact 4: Increased Project vessel traffic leading to interference**	**Impact 5: Gear snagging leading to loss of earnings**
Impact 1: Reduction in access to, or exclusion from the WDA	N/A	Minor. Short-term exclusion leading to displacement and redistribution of effort.	Minor. Artificial reef effects may alter fish distribution and resource availability.	Yes. Restricted access overlaps with maintenance vessel activity near structures.	Yes. Fishing within WDA boundaries increases snagging risk.
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Yes. Based on reduced access to WDA.	N/A	Yes. Concentrated effort may coincide with areas of ecological change (e.g. habitat colonisation).	Yes. Displaced vessels may operate near O&M traffic routes.	Yes. Redistribution elevates interaction risk with Windfarm Infrastructure.
Impact 3: Displacement or disruption of commercial resources	Yes. Habitat colonisation or EMF could slightly influence target species.	Yes. Altered species availability reinforces displacement patterns.	N/A	Yes. Vessel noise and maintenance operations can add minor disturbance.	Yes. Shifts in target species may move effort towards infrastructure.
Impact 4: Increased Project vessel traffic leading to interference	Yes. Overlaps with reduced access areas, constraining fishing manoeuvrability.	Yes. Maintenance traffic may conflict with displaced fleets.	Yes. Occasional underwater noise contributes to fish disturbance.	N/A	Yes. Higher vessel density raises snagging or collision risks.
Impact 5: Gear snagging leading to loss of earnings	Yes. Subsea infrastructure limits gear deployment areas.	Yes. Displaced vessels working near WDA Infrastructure face greater hazard.	Yes. Habitat enhancement (reefing) may attract fishing closer to structures.	Yes. Interaction with maintenance vessels adds navigation complexity.	N/A

Table 12.22 Potential interaction between impacts – decommissioning

Potential Interactions Between Decommissioning Impacts					
	Impact 1: Reduction in access to, or exclusion from the WDA	**Impact 2: Displacement leading to gear conflict and/or increased fishing pressure**	**Impact 3: Displacement or disruption of commercial resources**	**Impact 4: Increased Project vessel traffic leading to interference**	**Impact 5: Gear snagging leading to loss of earnings**
Impact 1: Reduction in access to, or exclusion from the WDA	N/A	Yes. Temporary exclusion causes displacement of fishing effort.	Yes. Disturbance of target species may exacerbate displacement.	Yes. Increased decommissioning vessel traffic further limits access.	Yes. Decommissioning debris and partial removals may heighten snagging risk.
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	Yes. Caused by restricted access.	N/A	Yes. Fish disturbance in adjacent areas can reduce available grounds.	Yes. Displaced fleets may encounter interference from decommissioning vessels.	Yes. Redistribution increases likelihood of gear snagging near removed infrastructure.
Impact 3: Displacement or disruption of commercial resources	Yes. Turbidity and noise may limit catchability in the area.	Yes. Effects effort and competition.	N/A	Yes. Vessel activity adds to disturbance.	Indirect. Disturbed fish movement may shift effort toward more hazardous areas.
Impact 4: Increased Project vessel traffic leading to interference	Yes. Restricts access to remaining fishable areas.	Yes. Vessel routes intersect displaced fleet paths.	Yes. Adds to resource disturbance through underwater noise and sediment release.	N/A	Yes. Increased marine activity raises entanglement risk.
Impact 5: Gear snagging leading to loss of earnings	Yes. Debris or partial removals near former turbine sites constrain fishing.	Yes. Concentrated effort near remaining subsea structures increases risk.	Yes. Displacement of fish may bring vessels closer to snagging areas.	Yes. Interaction with decommissioning vessels adds hazard.	N/A

Table 12.23 Potential interactions between impacts – phase and lifetime assessment

Potential Interactions Between Impacts – Phase And Lifetime Assessment					
Receptor	**Construction**	**Operation and Maintenance**	**Decommissioning**	**Phase Assessment**	**Lifetime Assessment**
UK potting targeting crab and lobster	Minor adverse	Minor adverse	Minor adverse	The effects on commercial fisheries across the phases are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase.	An interaction effect may occur through the combined influence of Impact 1 (reduction in access to, or exclusion from, the WDA), which could contribute to Impact 2 (displacement leading to gear conflict and/or increased fishing pressure) on adjacent grounds. In addition, displacement and altered fishing patterns have the potential to interact with Impact 3 (displacement or disruption of commercial resources), while Impact 4 (increased Project vessel traffic leading to interference) could further constrain fishing activity and influence where and when fishing can occur. There is also potential for these effects to interact with Impact 5 (gear snagging leading to loss of earnings), for example where displacement and increased activity in remaining available grounds elevates the likelihood of gear interactions. However, given the localised and temporary nature of the relevant impact pathways, it is considered that any interaction effect would not be of greater significance than the effects already assessed for each impact in isolation.
Irish potting targeting crab and lobster	Minor adverse	Minor adverse	Minor adverse		
UK potting targeting nephrops, whelk or ballan wrasse	Minor adverse	Minor adverse	Minor adverse		
UK demersal otter trawl targeting nephrops, haddock and mixed demersal species	Minor adverse	Minor adverse	Minor adverse		
UK scallop dredge targeting king scallop	Minor adverse	Minor adverse	Minor adverse		
UK commercial diving for shellfish	Minor adverse	Minor adverse	Minor adverse		
UK gear with hooks targeting mackerel	Minor adverse	Minor adverse	Minor adverse		
UK set nets for mixed demersal species	Minor adverse	Minor adverse	Minor adverse		
UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible to minor adverse	Negligible to minor adverse	Negligible to minor adverse		
Non-UK pelagic trawl for mackerel, sprat and other pelagic species	Negligible to minor adverse	Negligible to minor adverse	Negligible to minor adverse		

12.15 POTENTIAL MONITORING REQUIREMENTS

218. No residual significant adverse effects are currently predicted and, on this basis, there is no specific requirement under the EIA Regulations to propose monitoring measures.

219. Notwithstanding this, the Project proposes monitoring during the construction phase and following completion of construction to maintain an up-to-date understanding of fishing activity and patterns within and around the WDA, and to provide an evidence base to inform ongoing fisheries liaison.

220. Details of the proposed monitoring, its frequency and duration are provided in **Appendix 10 FMMCP**.

12.16 SUMMARY

221. **Table 12.24** presents a summary of the assessment of potential effects on commercial fisheries during the construction, O&M and decommissioning phases of the Project.

222. Significant effects were predicted for UK potting fleets targeting crab and lobster in relation to Impact 1 (reduced access/exclusion) and Impact 2 (displacement). Additional mitigation has been provided in the form of disruption agreements, delivered via a FMMCP.

223. Overall, with implementation of the FMMCP, the assessment has established that the WDA would result in residual effects of **minor adverse significance** (**not significant** in EIA terms).

Table 12.24 Summary of potential effects for commercial fisheries

Potential Impact	Receptor(s)	Relevant Embedded Mitigation Measures	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined assessment	Cumulative Residual Significance of Effect
Construction										
Impact 1: Reduction in access to, or exclusion from the WDA	UK potting targeting crab and lobster	M-16, M-17, M-18, M-19, M-21, M-22, M-23, M-25, M-28, M-29, M-32 and M-36.	Medium	Medium	Moderate adverse	Disruption agreements	Minor adverse	Monitoring of commercial fisheries landings data and spatial data, as set out in the FMMCP.	No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Low	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse		No significant residual effects likely.	
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse		No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse		No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse		No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	
	UK commercial diving for shellfish		Medium	Low	Minor adverse		Minor adverse		No significant residual effects likely.	
	UK gear with hooks targeting mackerel		Medium	Low	Minor adverse		Minor adverse		No significant residual effects likely.	
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse		No significant residual effects likely.	
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible		No significant residual effects likely.	
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible		No significant residual effects likely.	
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	UK potting targeting crab and lobster	M-16, M-17, M-19, M-21, M-22, M-23, M-28, M-29 and M-32.	Medium	Medium	Moderate adverse	Disruption agreements	Minor adverse	Monitoring of commercial fisheries landings data and spatial data, as set	No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Low	Low	Minor adverse		Minor adverse		No significant residual effects likely.	

Potential Impact	Receptor(s)	Relevant Embedded Mitigation Measures	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined assessment	Cumulative Residual Significance of Effect
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	out in the FMMCP.	No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse		No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse		No significant residual effects likely, although additional mitigation may be required due to effects in the vicinity of the Offshore ECC. This will be considered in detail within a future Offshore ECC EIA.	
	UK commercial diving for shellfish		Medium	Low	Minor adverse		Minor adverse		No significant residual effects likely.	
	UK gear with hooks targeting mackerel		Medium	Low	Minor adverse		Minor adverse		No significant residual effects likely.	
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse		No significant residual effects likely.	
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible		No significant residual effects likely.	
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible		No significant residual effects likely.	
Impact 3: Displacement or disruption of commercial resources	UK potting targeting crab and lobster	M-4, M-5, M-6, M-7, M-8 and M-16.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	Monitoring of commercial fisheries landings data and spatial data, as set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Low	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Medium	Low	Minor adverse		Minor adverse			
	UK gear with hooks targeting mackerel		Medium	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			

Potential Impact	Receptor(s)	Relevant Embedded Mitigation Measures	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined assessment	Cumulative Residual Significance of Effect
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
Impact 4: Increased Project vessel traffic leading to interference	UK potting targeting crab and lobster	M-10, M-16, M-17, M-18, M-19, M-21, M-22, M-23, M-24, M-27, M-28, M-29, M-31, M-32 and M-36.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	None beyond monitoring set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Medium	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Low	Low	Minor adverse		Minor adverse			
	UK gear with hooks targeting mackerel		Low	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			
	UK pelagic trawl for mackerel, sprat and other pelagic species		Negligible	Low	Negligible		Negligible			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Negligible	Low	Negligible		Negligible			
Impact 5: Gear snagging leading to loss of earnings	UK potting targeting crab and lobster	M-8, M-16, M-18, M-19, M-21, M-23, M-24, M-25, M-28, M-35 and M-36.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	None beyond monitoring set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Medium	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			
	UK scallop dredge targeting king scallop		Medium	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Low	Low	Minor adverse		Minor adverse			

Potential Impact	Receptor(s)	Relevant Embedded Mitigation Measures	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined assessment	Cumulative Residual Significance of Effect
	UK gear with hooks targeting mackerel		Low	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
Operation and Maintenance										
Impact 1: Reduction in access to, or exclusion from the WDA	UK potting targeting crab and lobster	M-16, M-17, M-18, M-19, M-20, M-21, M-22, M-25, M-29, M-32, M-34, M-35, M-36 and M-46.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	Monitoring of commercial fisheries landings data and spatial data, as set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Low	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Medium	Low	Minor adverse		Minor adverse			
	UK gear with hooks targeting mackerel		Medium	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible			
Impact 2: Displacement leading to gear conflict and/or increased fishing pressure	UK potting targeting crab and lobster	M-16, M-17, M-19, M-20, M-21, M-22, M-29, M-32 and M-34.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	Monitoring of commercial fisheries landings data and spatial data, as set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Low	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			

Potential Impact	Receptor(s)	Relevant Embedded Mitigation Measures	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined assessment	Cumulative Residual Significance of Effect
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Medium	Low	Minor adverse		Minor adverse			
	UK gear with hooks targeting mackerel		Medium	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Negligible	Negligible		Negligible			
Impact 3: Displacement or disruption of commercial resources	UK potting targeting crab and lobster	M-4, M-5, M-7, M-8, M-16 and M-46.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	Monitoring of commercial fisheries landings data and spatial data, as set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Low	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Medium	Low	Minor adverse		Minor adverse			
	UK gear with hooks targeting mackerel		Medium	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
Impact 4: Increased Project vessel traffic leading to interference	UK potting targeting crab and lobster	M-16, M-17, M-18, M-19, M-20, M-21, M-22, M-24, M-27, M-29, M-31, M-32, M-35 and M-36.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	None beyond monitoring set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Medium	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			

Potential Impact	Receptor(s)	Relevant Embedded Mitigation Measures	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined assessment	Cumulative Residual Significance of Effect
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			
	UK scallop dredge targeting king scallop		Low	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Low	Low	Minor adverse		Minor adverse			
	UK gear with hooks targeting mackerel		Low	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			
	UK pelagic trawl for mackerel, sprat and other pelagic species		Negligible	Low	Negligible		Negligible			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Negligible	Low	Negligible		Negligible			
Impact 5: Gear snagging leading to loss of earnings	UK potting targeting crab and lobster	M-8, M-16, M-18, M-19, M-20, M-21, M-24, M-25, M-35 and M-36.	Medium	Low	Minor adverse	None beyond embedded mitigation.	Minor adverse	None beyond monitoring set out in the FMMCP.	No significant residual effects likely.	No significant residual effects likely.
	Irish potting targeting crab and lobster		Medium	Low	Minor adverse		Minor adverse			
	UK potting targeting nephrops, whelk or ballan wrasse		Medium	Low	Minor adverse		Minor adverse			
	UK demersal otter trawl targeting nephrops, haddock and mixed demersal species		Low	Low	Minor adverse		Minor adverse			
	UK scallop dredge targeting king scallop		Medium	Low	Minor adverse		Minor adverse			
	UK commercial diving for shellfish		Low	Low	Minor adverse		Minor adverse			
	UK gear with hooks targeting mackerel		Low	Low	Minor adverse		Minor adverse			
	UK set nets for mixed demersal species		Medium	Low	Minor adverse		Minor adverse			
	UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
	Non-UK pelagic trawl for mackerel, sprat and other pelagic species		Low	Low	Minor adverse		Minor adverse			
Decommissioning										
Summary of impacts is as described for construction										

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