Environmental Impact Assessment Report
Volume 1, Chapter 14: Commercial Fisheries

MarramWind Offshore Wind Farm

December 2025

MarramWind

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14. Commercial Fisheries

14.1 Introduction

14.1.1.1 This Chapter of the Environmental Impact Assessment (EIA) Report presents the results of the assessment of the likely significant effects on commercial fisheries that may arise from the construction, operation and maintenance (O&M) and decommissioning of the offshore Project seaward of Mean High Water Springs (MHWS). It should be read in conjunction with the project description provided in **Chapter 4: Project Description** and the relevant parts of the following chapters and appendices:

- **Chapter 10: Benthic, Epibenthic and Intertidal Ecology**: Changes to shellfish 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. The information from the benthic, epibenthic and intertidal ecology chapter has been used to inform this Chapter.
- **Chapter 13: Fish Ecology**: Changes to fish 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. The information from the fish ecology chapter has been used to inform this Chapter.
- **Chapter 15: 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. The information from the shipping and navigation chapter has been used to inform this Chapter.
- **Chapter 30: 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. The information from the socio-economics chapter has been used to inform this Chapter.

14.1.1.2 This Chapter describes:

- the legislation, planning policy, guidance and other documentation that has informed the assessment (**Section 14.2 Relevant legislative and policy context**);
- the outcome of consultation and engagement that has been undertaken to date, including how matters relating to commercial fisheries have been addressed (**Section 14.3: Consultation and engagement**);
- the scope of the assessment for commercial fisheries (**Section 14.4: scope of the assessment**);
- the data sources and methods used for gathering baseline data including surveys where appropriate (**Section 14.5: Methodology for baseline data gathering**);
- the overall environmental baseline (**Section 14.6 Baseline conditions**);
- the basis for the EIA Report (**Section 14.7: Basis for Environmental Impact Assessment Report**);
- methodology for EIA Report (**Section 14.8: Methodology for Environmental Impact Assessment Report);**
- the assessment of commercial fisheries effects (**Section 14.9: Assessment of effects: Construction**; **Section 14.10: Assessment of effects: O&M**; and **Section 14.11: Assessment of effects: Decommissioning**);

- summary of effects (**Section 14.12: Summary of effects**);
- consideration of transboundary effects (**Section 14.13: Transboundary effects**);
- consideration of inter-related effects and cumulative effects (**Section 14.14: Inter-related effects** and **Section 14.15: cumulative effects assessment**);
- a summary of residual effects for commercial fisheries (**Section 14.16: Summary of residual likely significant effects**);
- a reference list is provided (**Section 14.17: References**); and
- a glossary of terms and abbreviations is provided (**Section 14.18: Glossary and abbreviations**).

14.1.1.3 This Chapter is also supported by the following Appendix and Outline Plan:

- **Volume 3, Appendix 14.1: 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.
- **Volume 4: Outline 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.

14.1.1.4 This Chapter is also supported by the following figures in **Volume 2**:

- **Figure 14.1: Commercial fisheries regional and local study areas**; and
- **Figure 14.2: Commercial fisheries access corridor**.

14.2 Relevant legislative and policy context and technical guidance

14.2.1 Legislative and policy context

14.2.1.1 This Section identifies the relevant legislation and policy context that has informed the scope of the commercial fisheries assessment. Further information on policies relevant to the EIA and their status is set out in **Chapter 2: Legislative and Policy Context**, which provides an overview of the relevant legislative and policy context for the Project. **Chapter 2: Legislative and Policy Context** is supported by **Volume 3, Appendix 2.1: Planning Policy Framework**, which provides a detailed summary of international, national, marine and local planning policies of relevance to the EIA. Individual policies of specific relevance to this assessment and associated appendices have been taken into account.

14.2.1.2 This summary provides a foundation for understanding the specific requirements that this Chapter must address in terms of assessing and mitigating impacts on receptors and relevant environmental issues.

14.2.1.3 The legislation relevant to commercial fisheries include:

- The Sandeel (Prohibition of Fishing) (Scotland) Order 2024;
- Fisheries Act 2020;
- Aquaculture and Fisheries (Scotland) Act 2013;
- The Sea Fishing (Licences and Notices) (Scotland) Regulations 2011;

- Marine (Scotland) Act 2010;
- Climate Change (Scotland) Act 2009 (indirect);
- The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004;
- Inshore Fishing (Scotland) Act 1984; and,
- Sea Fish (Conservation) Act 1967.

14.2.1.4 The policies relevant to commercial fisheries include:

- Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020) and associated impact assessments. This Plan, which was approved by the Scottish Ministers following public consultation, identified Plan Option NE7 for offshore wind development. It is important to note that the spatial extent of Plan Option NE7 was reduced following assessment of and consultation feedback on the Draft Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2019) specifically to avoid the areas of highest existing fishing activity highlighted by the fishing sector. The plan was then adopted by the Scottish Ministers and the ScotWind leasing round proceeded on this basis;
- Draft Updated Sectoral Marine Plan (Scottish Government, 2025c) and associated impact assessments. The spatial extent of Plan Option NE7 remains unchanged;
- Scottish National Marine Plan (Scottish Government, 2015); and
- United Kingdom (UK) Marine Policy Statement (MPS) (HM Government, 2011).

14.2.2 Relevant technical guidance

14.2.2.1 Other information and technical guidance relevant to the assessment undertaken for commercial fisheries include:

- Guidance on preparing Mitigation and Monitoring Plans: Fisheries Monitoring, Mitigation and Communication Plan (Scottish Government, 2025a);
- Offshore windfarms - monitoring impacts on the commercial fishing industry: good practice guidance (Scottish Government, 2025b);
- Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) Best Practice Guidance for Fisheries Liaison with Offshore Renewables Developments (FLOWW, 2025);
- Guidelines for liaison with the fishing industry on the United Kingdom Continental Shelf UKCS – Issue 8 (Offshore Energies UK, 2023);
- Good Practice Guidance for assessing fisheries displacement by other licenced marine activities (Scottish Government, 2022a);
- Recommendations for positive interactions between offshore wind farms and fisheries. European Innovation Council and SMEs Executive Agency (European Commission) (Dupont *et al.*, 2020);
- The North and East Coast Regional Inshore Fisheries Group Fisheries Management Plan 2019 (North and East Coast Regional Inshore Fisheries Group, 2019); and
- European Subsea Cables Association (ESCA) Guideline 01 and Appendices (ESCA, 2018);

- Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Disruption Settlements and Community Funds (FLOWW, 2015);
- FLOWW Recommendations for Fisheries Liaison: Best Practice guidance for offshore renewable developers (FLOWW, 2014 and noted to be currently in the process of being updated);
- 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);
- 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);
- Fishing and Submarine Cables – Working Together (International Cable Protection Committee, Drew 2009); and
- Guidance on Licencing and EIA requirements for offshore wind farms (Cefas, 2004).

14.3 Consultation and engagement

14.3.1 Overview

14.3.1.1 This Section describes the consultation and stakeholder engagement undertaken on the Project in relation to commercial fisheries. This includes early engagement, the outcome of and response to the Scoping Opinion*s* (Scottish Government, 2023; Aberdeenshire Council, 2023) in relation to the commercial fisheries assessment, non-statutory consultation, and the findings of the Project's Statutory Consultation. An overview of engagement undertaken for the Project as a whole can be found in Section 5.5 of **Chapter 5: Approach to the EIA**.

14.3.2 Key issues

14.3.2.1 A summary of the key issues raised during statutory and non-statutory consultation, specific to commercial fisheries, is outlined below in **Table 14.1**, together with how these issues have been considered in the production of this EIA Report.

14.3.2.2 Engagement with the fishing industry has been a key focus of MarramWind Limited (hereafter, referred to as 'the Applicant's') approach to the EIA process. The Applicant met with representatives from a range of fisheries organisations, as well as individual fishers, throughout the assessment period. Multiple meetings were held with many of the key stakeholders, and this engagement is reflected in the discussions and resolution of issues presented in **Table 14.1**. The dates of meetings with specific fisheries associations held across the EIA period are outlined in **Table 14.2**.

Table 14.1 Stakeholder issues responses – commercial fisheries

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
Marine Directorate Licencing Operations Team (MD-LOT)	347	12 May 2023, MD-LOT Scoping Opinion (Scottish Government, 2023).	5.10.1 *"The Scottish Ministers are content that all the relevant impact pathways have been scoped into the commercial fisheries assessment as set out in Table 5.9.9 of the Scoping Report and that the overall approach is appropriate."*	The advice is noted. All relevant impact pathways have been scoped into the assessment as confirmed in the Scoping Report.
MD-LOT	348	12 May 2023, MD-LOT Scoping Opinion (Scottish Government, 2023).	5.10.2 *"The Scottish Ministers, in line with the Marine Science Scotland (MSS) advice, recommend that the demersal 'otter trawl fleet' receptor is referred to more broadly as the 'demersal trawl fleet' given that other demersal gear types were identified within the study area in the Marine Management Organisation (MMO) UK annual fisheries landings statistics."*	The advice is noted. The following receptors are assessed separately: separately ▪ demersal otter trawl (including TR1 and TR2); ▪ demersal seine; ▪ pelagic otter trawl and purse seine; ▪ scallop dredge; ▪ beam trawl; ▪ potting; and ▪ gear with hooks
MD-LOT	349	12 May 2023, MD-LOT Scoping Opinion (Scottish Government, 2023).	5.10.3 *"The Scottish Ministers advise that the study area should be widened to include adjacent International Council for the Exploration of the Sea (ICES) rectangles, in line with good practice guidance, to better assess potential fisheries displacement, particularly given the size of the array area and the proposed floating technology. This is in line with MSS advice and is supported by the Scottish Fishermen's Federation (SFF)."*	The advice is noted. The study area has been widened to include a regional study area including adjacent ICES rectangles to allow better assessment of potential fisheries displacement.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
MD-LOT	350	12 May 2023, MD-LOT Scoping Opinion (Scottish Government, 2023).	5.10.4 *"The Scottish Ministers are broadly content that the relevant guidance has been identified in Table 5.9.2 of the Scoping Report but recommend that the additional guidance highlighted by MSS and contained within the 'Good Practice Guidance' document are used to inform the EIA Report. The Scottish Ministers also advise the Developer to consider the SFF advice regarding spawning herring guidance."*	The advice is noted. Additional guidance has been considered to inform the EIA Report, including: • Guidance on preparing Mitigation and Monitoring Plans: Fisheries Monitoring, Mitigation and Communication Plan (Scottish Government, 2025a); • Offshore windfarms - monitoring impacts on the commercial fishing industry: good practice guidance (Scottish Government, 2025b); and • Good Practice Guidance for assessing fisheries displacement by other licenced marine activities (Scottish Government, 2022). A full list of guidance is provided in **Section 14.2.2**.
MD-LOT	351	12 May 2023, MD-LOT Scoping Opinion (Scottish Government, 2023).	5.10.5 *"The Scottish Ministers advise that the ScotMap dataset should not be relied upon to provide information on the commercial fisheries baseline for the inshore fleet as it is out of date. In line with MSS advice and the SFF representation, this dataset should be used as a starting point and that consultation should be the primary source of information for the under 10m fleet. It is expected that the SFF will be included in this consultation."*	The advice is noted. The ScotMap dataset has been used as part of a comprehensive set of spatial activity data analysis. In addition, the gridded data for under 12 m vessels dataset which provides more up to date data for the smaller vessels class has also been included. Data has been ground-truthed and validated through consultation with local fishers and stakeholders, including the SFF.
MD-LOT	352	12 May 2023, MD-LOT Scoping Opinion (Scottish	5.10.6 *"The Scottish Ministers welcome the engagement with fisheries representatives that has been undertaken so far and recommend that early engagement with fisheries representatives is continued as suggested in paragraph 5.9.50*	The advice is noted. Quarterly meetings have been held with the SFF and the Scottish White Fish Producers Association (SWFPA), as well a periodic meetings with the Scottish Pelagic Fishermen's Association (SPFA). Engagement

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
		Government, 2023).	*of the Scoping Report. This engagement should take place as further clarity is gained on the export cable route and parameters, in line with SFF comments. The Scottish Ministers would also like to highlight from SFF representation the willingness of fisheries representatives to participate in knowledge sharing throughout the process."*	with fisheries representatives is being continued, in relation to all aspects of the Project, including the offshore export cable corridor and parameters.
MSS	590	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"MSS are content that all impact pathways have been scoped into the assessment for commercial fisheries, and that the overall approach to the assessment is appropriate."*	The advice is noted. All relevant impact pathways have been scoped into the assessment.
MSS	592	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"MSS note that currently only the demersal otter trawl fleet is identified as a receptor in Table 5.9.9. Given that other demersal gear types such as demersal seine and beam trawl were identified within the study area in the MMO fisheries statistics, MSS suggest that this receptor is referred to more broadly as the 'demersal trawl fleet', rather than specifically the 'otter trawl fleet'."*	The advice is noted. The following receptors are assessed separately: ▪ demersal otter trawl (including TR1 and TR2); ▪ demersal seine; ▪ pelagic otter trawl and purse seine; ▪ scallop dredge; ▪ beam trawl; ▪ potting; and ▪ gear with hooks
MSS	594	12 May 2023, MD-LOT Scoping	*"MSS note that the study area covers the ICES rectangles which the development overlaps with, but no adjacent rectangles. The document, "Assessing fisheries displacement*	The advice is noted. Additional guidance has been considered to inform the EIA Report, including:

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
		Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*by other licenced marine activities: good practice guidance" (Marine Scotland (Xodus), 2022b) recommends that the study area should include adjacent rectangles, if there is a risk that fishing effort may be displaced to them. MSS therefore advise that the developer widens the study area to better assess potential fisheries displacement, given the size of the proposed array area and the higher likelihood of fisheries exclusion in a floating offshore wind farm due to safety concerns over snagging fishing gear on subsea infrastructure."*	• Guidance on preparing Mitigation and Monitoring Plans: Fisheries Monitoring, Mitigation and Communication Plan (Scottish Government, 2025a); • Offshore windfarms - monitoring impacts on the commercial fishing industry: good practice guidance (Scottish Government, 2025b); and • Good Practice Guidance for assessing fisheries displacement by other licenced marine activities (Scottish Government, 2022). A full list of guidance is provided in **Section 14.2.2**.
MSS	596	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"MSS advise that a few additional data sources mentioned within the 'Good Practice Guidance' document[1] could be utilised in the EIA Report:* *1. The Marine Scotland Vessel Monitoring System (VMS) data, which provides finer scale data on Nephrops trawling.* *This may be of particular use given Nephrops is an important species in the proposed study area.* *2. The MMO surveillance sightings data which could provide insight into fishing activity nearer to shore.* *3. The Automatic Identification System (AIS) vessel tracks which are available via European Marine Observation and Data Network (EMODnet), which may be useful alongside the European Maritime Safety Agency (EMSA) vessel route density data already proposed.* *Further details on these data sources can be found within the 'Good Practice Guidance' document."*	The advice regarding baseline data sources has been noted and applied in EIA. This is evidenced by confirmation of the data sets used to characterise the baseline provided in **Section 14.5**.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
MSS	598	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"MSS advise that the ScotMap dataset should not be relied upon to provide information on the commercial fisheries baseline for the inshore fleet as it is out of date. MSS recommend this dataset is used as a starting point and that consultation should be the primary source of information for the under-10m fleet."*	The advice regarding baseline data sources has been noted and applied in EIA. This is evidenced by confirmation of the data sets used to characterise the baseline provided in **Section 14.5**.
MSS	600	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"Finally the 2021 fisheries statistics are now available and should be used for the EIA Report."* (Scottish Government, 2021).	The advice regarding baseline data sources has been noted and applied in EIA. This is evidenced by confirmation of the data sets used to characterise the baseline provided in **Section 14.5**.
SFF	602	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish	*"This response to the scoping request is presented by the SFF on behalf of the 450 plus fishing vessels in membership of its constituent associations, the Anglo Scottish Fishermen's Association, Fife Fishermen's Association. Fishing Vessel Agents and Owners Association, Mallaig & North West Fishermen's Association, Orkney Fisheries Association, Scottish Pelagic Fishermen's Association, the Scottish White Fish Producer's Association and Shetland Fishermen's Association. The chair of the NECrIFG has also been consulted."*	This comment is acknowledged.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
		Government, 2023).		
SFF	619	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"On P 5.9.3 it should be mentioned that MPA are not fisheries management measures per se, although in some instances it is required."*	The advice is noted and applied to the Cumulative Effects Assessment, which includes consideration of potential management measures implemented within MPAs.
SFF	620	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"P5.9.12, table 5.9.23 and further table 5.9.36, it is not enough to quote ScotMap, it was not a scientific assessment, so should be ground-truthed with the IFG in relevant harbours. Referring to P5.9.21, table 5.9.9 it should be incumbent on the project to have dialogue with the catching sector to develop meaningful mitigation. Para 5.9.24 and para 5.9.38 and para 5.9.39 the SFF is happy to give the developer a presentation on all these matters to help them better understand fishing."*	The advice regarding baseline data sources has been noted and applied in EIA. This is evidenced by confirmation of the data sets used to characterise the baseline provided in **Section 14.5**. Early engagement with fisheries representatives is being continued, in relation to all aspects of the Project, including through Pre-Application Consultation events and directly through the Fisheries Liaison Officer (FLO).
SFF	621	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses &	*"Looking at P5.9.17, para 5.9.41, it is impossible at this stage to assume burial of the cable, nor is it possible to predict the quantity of scour protection, rock berms etc will be the result of the project."*	The impact of the export cable and array cables and associated cable protection and construction practices (including boulder removal) are considered within the impact assessment in **Sections 14.9**, **14.10** and **14.11** in addition, it is highlighted that the CaP will confirm planned cable routing, burial and

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
		Advice (Scottish Government, 2023).		any additional protection and will set out methods for post-installation monitoring.
SFF	622	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"Then para 5.9.42 regarding the possibility of complete loss to fishing, cannot be glossed over, and the SFF would expect the project to address this matter preconsent! Para 5.9.45 to the SFF is good practice and legislative requirements which is not mitigation for fishers. Similarly table 5.9.8 is a communications plan, not mitigation and the SFF would re-iterate this must be addressed preconsent."*	The feedback has been taken on board by the Applicant and the content of this table demonstrates further and ongoing engagement with the fishing industry and its representatives. The Applicant recognizes the importance of engaging with other marine users during and beyond the consent application process. **Volume 4: Outline Fisheries Mitigation, Monitoring and Communication Plan** provides details of commitments and monitoring related to commercial fisheries activity. This has been prepared in line with guidance.
SFF	623	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"Para 5.9.48 and table 5.9.9 is setting the scene for an EIA assessment of negligible or minor impact, but the SFF again re-iterates this is likely to be grounds lost to fishing so the mitigation must be agreed pre-consent. Displacement is not as straight forward as the paper suggests. Additional transiting and steaming will have a negative effect on the industry's low carbon footprint."*	The EIA assumes that fishing will not resume within the Option Agreement Area (OAA) from point of construction onwards. Other impacts related to displacement and additional steaming to alternative grounds are assessed within the impact assessment in **Sections 14.9**, **14.10** and **14.11**.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
SFF	625	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"And finally, referring to para 5.9.57, the SFF would insist on properly designed specific surveys of commercial fisheries, pre, post and during construction, in the area to enable a full assessment of the impacts in due course."*	**Volume 4: Outline Fisheries Mitigation, Monitoring and Communication Plan** provides details of commitments and monitoring related to commercial fisheries activity. This has been prepared in line with guidance.
Peterhead Fishery Office	639	12 May 2023, MD-LOT Scoping Opinion Appendix 1: Consultation Responses & Advice (Scottish Government, 2023).	*"I had a quick look and can only say that the marram wind farm will have an effect on Prawn vessels and vessels sometimes fishing for haddock."*	The EIA has assessed impacts to demersal otter trawl fleet, including the Nephrops (*Nephrops norvegicus*) (also known as prawn, Norway lobster and langoustine, hereafter referred to as Nephrops) and monkfish (*Lophius piscatorius*) and haddock (*Melanogrammus aeglefinus*) targeted fisheries.
NatureScot	659	30 September 2022, Meeting.	*"NatureScot questions whether the Project has fully considered potential cumulative impact of future floating windfarms and commercial fishing - Is there potentially a net gain to be achieved or is it expected to become or more intense?"*	The advice is noted. A cumulative effects assessment has been undertaken, which identified significant effects for the demersal otter trawl fleet. The Applicant supports a strategic approach to resolving cumulative effects across multiple developers, recognising the importance of coordinated management for commercial fisheries alongside floating windfarm development.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
SFF	731	7 March 2023, Meeting.	*"An update meeting was held on 7th March 2023. Key discussion points were:* *• Site investigation (geophysical and geotechnical) campaign for the offshore export cable corridor.* *• The Project outlined that the Project has taken lessons learned following the marine traffic survey that the commercial team would reach out to SFF for vessel hire.* *• Nearshore fisheries engagement related to surveys.* *• Fishers could feedback on ground conditions area that may be a challenge to trench/bury based on their experience.* *• Fisheries stakeholder meetings, engagement with fishers, fisheries boards should not be considered alongside commercial fishing.* *• Scoping Report findings.* *• Fisheries livelihood impacts."*	The advice is noted. Early engagement with fisheries representatives is being continued, particularly in relation to the export cable route and parameters. The impact of the export cable and array cables and associated cable protection and construction practices (including boulder removal) are considered within the impact assessment in **Sections 14.9**, **14.10** and **14.11**; in addition, it is highlighted that the CaP will confirm planned cable routing, burial and any additional protection and will set out methods for post-installation monitoring.
SFF	750	7 March 2023, Meeting.	*"SFF stated that within EIA when impacts on commercial fisheries are classed as 'minor' it causes concern with its members"*	This is acknowledged. The methodology for impact assessment is provided in **Section 14.8**, including assessment of sensitivity of each receptor, magnitude of the impact and the overall significance of effect. The Applicant highlights that the range of the assessment findings covers minor, moderate and major significant effects.
Scottish Pelagic Fishermen's Association (SPFA)	751	29 January 2024, Meeting.	*"The Project asked whether the data showing non-UK vessels landing into the UK after 2019 was expected?"* *"SPFA added that as the fishery is highly variable it depends on what markets are offering best price. SPFA stated that mackerel are in Norwegian sea in the summer, then in autumn the stock migrate south, into the UK zone."*	The Applicant appreciates the insight provides and confirms that a detailed baseline characterisation is provided in **Volume 3, Appendix 14.1**. The baseline assessment includes analysis of landings data from 2012 to 2023.

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			"SPFA stated that SPFA have detailed catch and haul data since 2018 recording the location and samples from each vessel, shows finer scale information beyond ICES rectangles. Happy to forward the reports on this. SM added that there is variability in the October mackerel and June herring. As the herring spawning grounds are known, the autumn fishery is less variable."	
SPFA	752	29 January 2024, Meeting.	*"The Project shared a slide comparing the SPFA VMS and MMO VMS data and requested a scale for data to understand the SPFA data in more detail. The Project asked whether the data was provided by the Marine Directorate? SPFA stated that the plotter data collected by SPFA is more consistent with the MMO VMS and that the data was from the marine directorate. SPFA will review the data and revert back."* *"The Project added that the data showing intense activity in the centre of MarramWind site is surprising so would be good to understand the supporting data. SPFA shared the plotter data. Showed the herring fishery on the NE edge of MarramWind site as well as some searching marks in the middle of the site."*	The Applicant confirms that subsequent email correspondence clarified that the SPFA VMS dataset had been corrected to remove a vessel that was mistakenly included due to a similar name, despite not being a pelagic vessel. Following this correction, the SPFA confirmed that the herring fishery is not targeted within the OAA.
			"The Project added that is was surprising to see herring as landing statistics show mackerel was the highest value species. SPFA stated that the data is for the ICES rectangle only. However, there is activity further north, highlight the importance of many data sources. Within the ICES rectangle mackerel activity is shown to north, and the price and volume outweighs the herring fishing activity."	
SFF	754	6 June 2024, Meeting.	*"SFF shared fishing plotter data of the MarramWind site, showing pair trawl activity for white fish and prawn trawl activity for Nephrops. The tracks also indicate herring fishing on the west side along the deep sea shelf. SFF added that the prawns*	Fishing vessel plotter data has been sourced from fishing industry representatives and has informed the characterization of the baseline and impact assessment.

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			are not fished on the pipeline but white fish are, and that the north west boundary of the site is important for trawling. SFF highlighted the importance of the pipeline gates for fishing vessels to fish across pipelines, raised concerns around the proximity of turbines to the southern gate."	
			"The Project stated that avoiding the southern pipeline gate could be a challenge, due to expected layout of the export cabling. The Project added that the minimum distance from the pipeline to the anchor touch down point would be 1km and noted that in the previous engineering workshop held in June 2023, SWFPA had requested the pipeline kept clear to allow for fishing to resume along the pipeline."	The Applicant has committed to additional mitigation related to the Access Corridor, see **Table 14.12**.
SFF	755	6 June 2024, Meeting.	*"The Project provided an indicative outline of the turbine layout. The wind is predominantly from SW so likely to build out SW side of array first adding that there is a wake effect impact on the wind from any turbines within 50km, so this informs the turbine build out. MarramWind are looking to build in phases if practicable. The plan is to install the turbine moorings and then the floaters the next year. It is expected that the offshore platform will be in an area of shallow water as more economic solution. Floating substation are not being considered due to export cable dynamic technology not yet being available and sufficiently shallow water depth for jackets."* *"SFF asked what the distance between turbines would be for the 15MW vs the 25MW turbines and asked whether installing 20 - 25 turbines in the first year is ambitious? The Project replied it is typically a minimum of the 6x diameter of blade. For a 15MW turbine, this would be 220m so 1.5km from the centre of each turbine. Would assume less turbines would be installed in first year as the technology is still advancing, however would*	The Applicant confirms the project parameters for the purpose of impact assessment are set out in **Section 14.7**. While details have been provided for indicative layout and spacing for 25 megawatts (MW) turbines, these do not represent the maximum design scenario as presented in **Section 14.7.1**. For avoidance of any doubt, the impact assessment assumes that fishing will not resume within the OAA.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
			be fabricating the floaters all year round so they are ready to be installed in the summer months."	
SFF	756	6 June 2024, Meeting.	*"SFF stated that the wet storage of floaters is a concern to the fishing industry. Many developers will be constructing at the same time so will be using the same storage areas."*	The Applicant confirms that any wet storage would be located within one of the firths, under the jurisdiction of the relevant Port Authority. Wet storage has not been assessed as part of this impact assessment, as it lies outside the scope of the Project EIA.
SFF	757	6 June 2024, Meeting.	*"The Project provided an outline of the mooring options.* *SFF raised concerns about ground being returned to how it was before and asked how many mooring lines would be used for each turbine? The Project stated that the industry standard is three mooring lines for smaller WTGs and added that shared anchors limits to four. SFF asked whether there is a risk to using three if one is damaged? The Project noted this. Some floater designs connect in a triangle design to prevent rotation. The bigger turbines require additional moorings. As the concept engineering has not been carried out the project has used up to six in the scoping assessment"*	The maximum design scenario is provided in **Section 14.7.1** which confirms the project description assessed for commercial fisheries.
SFF	758	6 June 2024, Meeting.	*"SFF raised concerns around the use of rock protection in the export cable. SFF added that in late 2023 / early 2024 some vessels were having snagging issues near the MarramWind array in offshore export cable corridor area. SFF added that mattresses are a major snagging concern for the fishing industry, and that they been used on SSEN cables as the cables were becoming unburied. The Project stated that for the export cable the intention was to bury where possible. The Project stated that for cable crossings, the cable would be trenched 500m either side of crossing and stated pipeline*	The impact of the export cable and array cables and associated cable protection and construction practices (including boulder removal) are considered within the impact assessment in **Sections 14.9**, **14.10** and **14.11**; in addition, it is highlighted that the CaP will confirm planned cable routing, burial and any additional protection and will set out methods for post-installation monitoring.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
			crossings would normally have a crossing design that consisted of mattresses and then rock protection on top." *"SFF raised concerns about fishing vessels removing the rock protection during tows and then snagging on the mattress. SFF asked what happens if the cable is damaged? The Project stated that this information can be provided."*	The Applicant is committed to burial of the cables where possible and / or use of external cable protection such as rock placement and / or concrete mattressing. Concrete mattresses only used in isolation in non-fished areas to ensure no snagging issues for fisheries industry. Where appropriate, nature-inclusive design options will be considered in the selection and placement of cable protection measures.

14.3.2.3 **Table 14.2** provides a record of all commercial fisheries meetings that have taken place for the Project. This includes UK fisheries associations, as well as Belgian, Dutch, French and Danish fisheries associations. German fisheries representative were also given the opportunity to meet but have not responded.

Table 14.2 Record of commercial fisheries meetings

Date	Stakeholder
11 March 2022	SFF, SWFPA.
06 June 2022	SFF, SWFPA.
16 November 2022	SFF, SWFPA, Community Inshore Fisheries Alliance (CIFA).
31 July 2023	SWFPA
07 March 2023	SFF, SWFPA.
12 January 2024	SFF, SWFPA, SPFA.
29 January 2024	SPFA
06 June 2024	Statutory consultation event workshops (inshore fishers & SFF SPFA).
24 September 2024	SFF, SWFPA.
19 March 2025	SFF, SWFPA, SPFA.
25 June 2025	SFF, SWFPA.
03 July 2025	SFF.
24 July 2025	Belgian fisheries, represented by Rederscentrale.
04 August 2025	Dutch fisheries, represented by VisNed.
26 August 2025	French fisheries, represented by FROM (Fonds Régional d'Organisation du Marché du poisson) Nord.
28 August 2025	Danish fisheries, represented by Danmarks Fiskeriforening Producent Organisation.

14.4 Scope of the assessment

14.4.1 Overview

14.4.1.1 This Section sets out the scope of the EIA for commercial fisheries. This scope has been developed as the Project's design has evolved and responds to stakeholder feedback received to-date, as set out in **Section 14.3**.

14.4.2 Spatial scope and study area

14.4.2.1 The spatial scope of the commercial fisheries assessment is defined as having two study areas: local study area and regional study area, and these have formed the basis of the study area described in this Section.

14.4.2.2 The Project is located within the southern portion of ICES Division 4a (northern North Sea), within UK Exclusive Economic Zone (EEZ) waters. For the purpose of recording commercial fisheries landings, ICES Divisions are subdivided into statistical rectangles. The Project overlaps with rectangles 44E8, 44E9, 45E8, and 45E9. The OAA lies within rectangle 45E9, while the offshore export cable corridor overlaps with all four rectangles.

14.4.2.3 Two study areas have been defined for commercial fisheries, as illustrated in **Volume 2, Figure 14.1**:

- commercial fisheries local study area: ICES rectangles 44E8, 44E9, 45E8, and 45E9; and
- commercial fisheries regional study area: ICES rectangles 43E8 to 43E9, 44E7 to 44F0, 45E8 to 45F0, and 46E8 to 46F0.

14.4.2.4 The local study area provides a focus on the overlap between the Project and the relevant ICES rectangles.

14.4.2.5 To understand fishing activity in adjacent waters, a regional study area has also been defined, encompassing the local study area and the surrounding ICES rectangles. Owing to the Project's location, this regional study area is relatively large. Analysis at this scale recognises that most commercial fish and shellfish populations are distributed more widely and ensures that potential implications of displaced fishing activity can be assessed across a reasonable area. This approach is consistent with the Good Practice Guidance for Assessing Fisheries Displacement by Other Licenced Marine Activities (Scottish Government, 2022a), which advises that fishing activity should be described both in the ICES rectangles where a development is located and in adjacent rectangles where necessary. Defining study areas in this way ensures that potential displacement effects are assessed within an ecologically and operationally meaningful framework.

14.4.3 Temporal scope

14.4.3.1 The temporal scope of the assessment of commercial fisheries is the entire lifetime of the Project, which therefore covers the construction, O&M, and decommissioning stages as set out in **Chapter 4: Project Description**.

14.4.3.2 It is anticipated that the construction of the Project will commence in 2030, with the first phase becoming fully operational by 2037. It is anticipated that the second phase of the Project would become fully operational by 2040 and the third phase by 2043. The operational lifetime of the Project for each phase is expected to be 35 years.

14.4.4 Identified receptors

14.4.4.1 The spatial and temporal scope of the assessment enables the identification of receptors that may experience a change as a result of the Project. The receptors identified that may experience likely significantly effects for commercial fisheries are outlined in **Table 14.3**.

Table 14.3 Identified receptors requiring assessment for commercial fisheries

Receptor group	Receptors included within group
Demersal otter trawl	Demersal otter trawl TR1 (cod-end ≥ 100 millimetres (mm) mesh) gear targeting demersal finfish species and / or cephalopods including haddock, monkfish, cod (*Gadus morhua*), whiting (*Merlangius merlangus*), saithe (*Pollachius virens*), hake (*Merluccius merluccius*), squid (*Loligo forbesii*) / (*Loligo vulgaris*) and other demersal finfish. Demersal otter trawl TR2 (cod-end 70-99mm mesh) gear targeting Nephrops. Demersal otter trawls may be deployed as pair trawls, single trawls, and multi-rigged trawls. In this area it is most common for TR1 trawls to be deployed as pair trawls and TR2 trawls to be deployed as multi-rigged trawls.
Demersal seine	Demersal seine gear targeting demersal finfish species including haddock, monkfish, cod, whiting, saithe, hake, squid and other demersal finfish.
Pelagic trawl / purse seine	Pelagic nets targeting the mid-water column to target pelagic species including herring (*Clupea harengus*) and mackerel (*Scomber scombrus*).
Dredge	Dredge gear targeting king scallop (*Pecten maximus*).
Beam trawl	Beam trawl gear targeting squid and mixed demersal finfish species.
Potting	Pots or traps targeting lobster (*Homarus gammarus*), brown crab (*Cancerpagurus*) and velvet crab (*Necora puber*).
Gear with hooks	Handline and / or jigging to target seasonal mackerel fishery.
Gill nets and entangle nets	Fixed nets to target monkfish, cod and mixed demersal species.

14.4.5 Potential effects

14.4.5.1 Potential effects on commercial fisheries receptors that have been scoped in for assessment are summarised in **Table 14.4**.

Table 14.4 Potential effects for commercial fisheries

Receptor	Activity or impact	Potential effect
Construction stage		
All commercial fisheries receptors	Impact C1: Reduction in access to, or exclusion from established fishing grounds within the OAA.	Potential effect on the availability of fishing grounds, resulting in reduced access for fishing vessels and potential economic loss to fishers during construction.

Receptor	Activity or impact	Potential effect
All commercial fisheries receptors	Impact C2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor.	Potential effect on the availability of fishing grounds, resulting in reduced access for fishing vessels and potential economic loss to fishers during construction.
All commercial fisheries receptors	Impact C3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	Potential effect of increased competition and congestion on adjacent fishing grounds, increasing the risk of gear conflict and reducing catch rates during construction.
All commercial fisheries receptors	Impact C4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity.	Potential effect of reduced catchability or availability of target species, causing disruption to fishing activity and potential economic losses during construction.
All commercial fisheries receptors	Impact C5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity.	Potential effect of safety risks, restricted manoeuvrability and disruption to fishing operations caused by increased construction vessel traffic.
All commercial fisheries receptors	Impact C6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project.	Potential effect of increased operational costs and time for vessels having to travel further to alternative grounds during construction.
All commercial fisheries receptors	Impact C7: Increased snagging risk, which could result in loss or damage to fishing gear.	Potential effect of snagging gear and loss of gear and earnings related to loss of ability to fish.
O&M stage		
All commercial fisheries receptors	Impact O1: Reduction in access to, or exclusion from established fishing grounds within the OAA.	Potential loss of access to traditional fishing grounds, reducing available fishing area and potentially affecting fishing income.
All commercial fisheries receptors	Impact O2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor.	Potential loss of access to traditional fishing grounds, reducing available fishing area and potentially affecting fishing income.
All commercial fisheries receptors	Impact O3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	Potential effect of displacement of fishing effort, causing competition, gear interactions and reduced catch rates on adjacent grounds.
All commercial fisheries receptors	Impact O4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity.	Potential effect of reductions in the availability or distribution of target species, resulting in disruption to fishing activity.

Receptor	Activity or impact	Potential effect
All commercial fisheries receptors	Impact O5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity.	Potential effect of navigational constraints and safety risks from operational vessel traffic, leading to disruption to fishing operations.
All commercial fisheries receptors	Impact O6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project.	Potential effect of increased operational costs and time for vessels travelling further to alternative fishing grounds during operation.
All commercial fisheries receptors	Impact O7: Increased snagging risk, which could result in loss or damage to fishing gear.	Potential effect of snagging gear and loss of gear and earnings related to loss of ability to fish.
Decommissioning stage		
All commercial fisheries receptors	Impact D1: Reduction in access to, or exclusion from established fishing grounds within the OAA.	Potential effect on the availability of fishing grounds, resulting in reduced access for fishing vessels and potential economic loss to fishers during decommissioning.
All commercial fisheries receptors	Impact D2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor.	Potential effect on the availability of fishing grounds, resulting in reduced access for fishing vessels and potential economic loss to fishers during decommissioning.
All commercial fisheries receptors	Impact D3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	Potential effect of increased competition and congestion on adjacent fishing grounds, increasing the risk of gear conflict and reducing catch rates during decommissioning.
All commercial fisheries receptors	Impact D4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity.	Potential effect of reduced catchability or availability of target species, causing disruption to fishing activity and potential economic losses during decommissioning.
All commercial fisheries receptors	Impact D5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity.	Potential effect of safety risks, restricted manoeuvrability and disruption to fishing operations caused by increased decommissioning vessel traffic.
All commercial fisheries receptors	Impact D6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project.	Potential effect of increased operational costs and time for vessels having to travel further to alternative grounds during decommissioning.
All commercial fisheries receptors	Impact D7: Increased snagging risk, which could result in loss or damage to fishing gear.	Potential effect of snagging gear and loss of gear and earnings related to loss of ability to fish.

14.4.6 Effects scoped out of assessment

14.4.6.1 No effects have been scoped out of the commercial fisheries assessment.

14.4.7 Consideration of the Draft Updated Sectoral Marine Plan

14.4.7.1 The Project has carefully considered the Draft Updated Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2025c) and its supporting assessments, including the Strategic Environmental Assessment (Scottish Government, 2025d) and the Social and Economic Impact Assessment (SEIA) (Scottish Government, 2025e). 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.

14.4.7.2 It is highlighted that the spatial extent of Plan Option NE7 was reduced following assessments of and consultation feedback on the Draft Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2019) specifically to avoid the areas of highest existing fishing activity highlighted by the fishing sector. The plan was then adopted by the Scottish Ministers and the spatial extent of NE7 remains unchanged in the Draft Updated SMP (Scottish Government, 2025c).

14.4.7.3 The Draft Updated SMP (Scottish Government, 2025c) 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 cessation of fishing and that no displacement will occur. This differs from the assumption within the EIA Report, that some level of displacement will occur.

14.4.7.4 Consideration in the EIA

14.4.7.5 The EIA has integrated these principles through detailed baseline characterisation of commercial fishing activity within the OAA and surrounding region, including analysis of fishing effort, gear type distribution, and landings value. For example, demersal and pelagic trawling, as well as seine netting, have been mapped to illustrate intensity and overlap. The Project has engaged with local and regional fisheries representatives from the early design stage, which has directly informed the development of an access corridor to facilitate potential future fishing operations (see **Volume 2, Figure 14.2**). In addition, the Project has committed to exploring a fisheries fund as a mechanism to address economic impacts, alongside measures such as early communication of construction activities and consideration of coexistence opportunities where technically feasible. In relation to inshore areas and the ECC, the Project has committed to exploring the feasibility and, if possible, execution of a baseline near shore survey ahead of construction commencing with the other developers in the region, in collaboration with the fishers.

Strategic Environmental Assessment

14.4.7.6 The SEA (Scottish Government, 2025d) identifies relatively high fishing intensity within NE7, including use of demersal seines, trawls, midwater trawls, and surrounding nets. It also notes limited spatial flexibility for array design due to density requirements (up to 88% occupancy at 5MW/km²).

Consideration in the EIA

14.4.7.7 Recognising this constraint, the EIA has taken a precautionary approach by assuming that fishing activity will not resume within the OAA post-construction, other than potential exploration within the designated access corridor. This assumption provides a realistic worst-case basis for impact assessment, while also acknowledging that certain coexistence

opportunities could be explored further in dialogue with industry. The Project has incorporated catenary mooring systems with an 800m radius and minimum turbine spacing of 800m within the design envelope, providing clarity on the physical footprint of the array. While tension leg platforms remain part of the design envelope, they are not considered the worst case for fisheries interactions.

Social and Economic Impact Assessment

14.4.7.8 The SEIA (Scottish Government, 2025e) quantifies potential economic costs to commercial fisheries within the OAA (present value £10.3m over 50 years). This SEIA valuation adopts an approach of assuming complete cessation of fishing activity within NE7 and no displacement to alternative grounds.

14.4.7.9 The SEIA also identifies commercial fisheries and shipping as key spatial constraints and highlights that tension leg platforms could offer coexistence options for certain gear types. It stresses the importance of early and meaningful engagement with skippers, appropriate cable burial and monitoring, and dissemination of information.

Consideration in the EIA

14.4.7.10 The EIA reflects these findings by providing a detailed baseline characterisation, including disaggregated fisheries value by fleet, which has informed the magnitude assessment, as well as sensitivity analysis that considers fleet dependency (for example, higher reliance of demersal trawlers and seiners in the inshore areas of North East Scotland, see Section 14.9). Engagement has been ongoing through meetings with the SFF, local associations, and individual stakeholders. This has informed the EIA process and development of mitigation including the access corridor.

14.4.7.11 Importantly, the EIA acknowledges that while the SEIA adopts a worst-case assumption of complete cessation of fishing, feedback from fisheries stakeholders suggests that partial displacement is also a realistic outcome. This understanding has informed the project's impact interpretation and mitigation design. The EIA assumes fishing will not resume within the OAA, with exception of the Access Corridor; and also considered that displacement is likely to occur.

14.4.7.12 The Project has also committed to regular communication with fisheries representatives, both during the construction and O&M stages, and to exploring opportunities for coexistence where appropriate.

Cumulative

14.4.7.13 The draft SMP, SEA and SEIA emphasise the need for a strategic approach to cumulative effects across multiple offshore wind projects. This is particularly relevant given the scale of ScotWind and INTOG leasing rounds. The Project supports this direction and notes that while the EIA addresses cumulative loss of fishing grounds and displacement within its own assessment framework, it also welcomes ongoing Government-led initiatives to coordinate cumulative fisheries assessments at a regional and national scale.

14.5 Methodology for baseline data gathering

14.5.1 Overview

14.5.1.1 Baseline data collection has been undertaken to obtain information over the study area described in **Section 14.4**. The current and future baseline conditions are presented in **Section 14.6**.

14.5.1.2 Commercial fisheries information and data have been reviewed and analysed to inform this commercial fisheries baseline. In addition, consultation with commercial fisheries industry representatives has been carried out to aid the collection of baseline information.

14.5.2 Desk study

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

14.5.2.2 The data sources that have been collected and used to inform this commercial fisheries assessment are summarised in **Table 14.5**.

14.5.2.3 Data has been sourced from ICES (ICES, 2022), the European Union (EU) Data Collection Framework (EU DCF, 2023), the Marine Directorate National Marine Plan interactive (NMPi) (Marine Directorate, 2024), the UK Marine Management Organisation (MMO) (MMO, 2011-2024; MMO, 2021; and MMO 2022) and the European Maritime Safety Agency (EMSA) (EMSA, 2024).

14.5.2.4 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, for example, 2012-2016; 2016-2020 or 2011-2022.

14.5.2.5 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.

14.5.2.6 The Commercial Fisheries Technical Baseline Report (**Volume 3, Appendix 14.1**) includes full details of the analysis undertaken to develop the commercial fisheries baseline.

Table 14.5 Data sources used to inform the commercial fisheries Chapter

Source	Date	Summary	Coverage of study area
MMO, annual landings statistics publications up to 2024	2011 to 2023	Landings statistics data for UK-registered vessels, with data query attributes for: landing year; landing month; vessel length category; ICES rectangle; vessel / gear type; port of landing; species; live weight (tonnes); and value (£).	Full coverage of the study areas.
EU DCF, 2024	2019 to 2023	Landings statistics for EU registered vessels with data query attributes for: landing year; landing quarter; ICES rectangle; vessel length; gear type; species; and, landed weight (tonnes).	Full coverage of the study areas.
MMO, 2022b	2012 to 2020	VMS data for UK registered vessels ≥15m length. Note that UK vessels ≥12m in length have VMS on board, however, to date, the MMO provide amalgamated VMS datasets for ≥15m vessels only. VMS data sourced from MMO displays the first sales value (£) of catches.	Full coverage of the study areas.
ICES, 2022	2016 to 2020	VMS data for EU registered vessels ≥12m length. VMS data sourced from ICES displays the surface Swept Area Ratio (SAR) of catches by different gear types and covers EU (including UK) registered vessels 12m and over in length. Surface SAR indicates the number of times in an annual period that a demersal fishing gear makes contact with (or sweeps) the seabed surface. Surface SAR provides a proxy for fishing intensity.	Full coverage of the study areas.
Kafas *et al.*, 2013	2009 to 2013	Fishing intensity based on VMS and landings data for UK vessels ≥15m in length for squid, demersal species, Nephrops and scallops. Accessed via NMPi.	Full coverage of the study areas.
EMSA, 2024	2019 to 2023	Fishing vessel route density, based on vessel AIS positional data. AIS is required to be fitted on fishing vessels ≥15m length.	Full coverage of the study areas.

Source	Date	Summary	Coverage of study area
Marine Directorate, 2022	2021	Positional data for Scottish registered vessels ≥12m length. Accessed via NMPi.	Full coverage of the study areas.
MMO, 2023b	2019 to 2022	Surveillance data indicating vessel nationality and gear type for actively fishing vessels.	Full coverage of the study areas.
Marine Directorate, 2023	2022	Scottish fishing vessel VMS data indicating fishing intensity by gear type.	Coverage of inshore area out to 12 nautical mile (nm), in its entirety.
Scottish Government, 2020 and 2025	2020 and 2025	Sectoral Marine Plan (2020) and draft Sectoral Marine Plan (2025), including description of regional commercial fisheries activity.	Full coverage of the study areas.
Shelmerdine and Mouat, 2021	Long term data set	North Atlantic Fisheries College Marine Centre University of Highlands and Islands (2021), Fisheries activity mapping in the North East Regional Inshore Fisheries Group (NERIFG) area.	Coverage of inshore area out to 12nm.
SPFA, 2024a	2013 to 2021	SPFA VMS data for Scottish pelagic trawl member vessels for 2013-2021.	Full coverage of the study areas.
SFF, 2024 [Confidential]	2012 to 2021	SFF vessel plotter data indicating location of fishing.	Full coverage of the study areas.
Norwegian Directorate of Fisheries, 2023	2012 to 2022	Statistikkomrader: Norwegian long term VMS data for Norwegian vessels.	Full coverage of the study areas.
Cefas, 2024	2012 to 2021	Fisheries Sensitivity Mapping and Displacement Modelling (FiSMaDiM).	Full coverage of the study areas.
Anatec Ltd, 2024	2023 to 2025	Project marine traffic (AIS and radar) survey data (plus analysis of a 12-month AIS dataset).	Partial coverage of the study areas.

14.5.3 Site surveys

14.5.3.1 MarramWind marine traffic (AIS and radar) survey data has been collated across summer and winter periods of 28 days each. This data covered fishing vessels both actively fishing and in transit.

14.5.3.2 Baseline data sources have been validated via engagement with fisheries stakeholders and by the results of site-specific marine traffic surveys that are described in **Chapter 15: Shipping and Navigation**.

14.5.3.3 Engagement with fisheries stakeholders confirmed broad agreement with the commercial fisheries baseline presented. Stakeholders highlighted key fishing grounds across the Project's Offshore Red Line Boundary, which are identifiable within the baseline data and associated figures. Their input helped to validate the spatial representation of fishing activity and ensured that locally important areas are accurately reflected in the assessment.

14.5.4 Data limitations

14.5.4.1 Limitations of landings data include the spatial size of ICES rectangles, which can misrepresent actual activity across the Project, and care is therefore required when interpreting the data.

14.5.4.2 It is noted that all commercial landings by UK registered vessels are subject to the Registration of Buyers and Sellers (RBS) legislation and therefore landings by UK vessels of all lengths are recorded within the MMO iFish database. Whilst it is recognised that there is no statutory requirement for owners of vessels 10m and under to declare their catches, registered buyers are legally required to provide sales notes of all commercially sold fish and shellfish due to the 2005 RBS of First-Sale Fish Scheme (RBS legislation) (MMO, 2021). The RBS legislation is applicable to licenced fishing vessels of all lengths and requires name and Port Letters and Numbers of the vessel which landed the fish to be recorded in relation to each purchase. For the 10m and under sector, landing statistics are recorded on sales notes provided by the registered buyers (MMO, 2021). Information that may not be formally recorded on the sales note, such as gear and fishing area, is added by coastal staff based on local knowledge of the vessels they administer. For example, from observations of the vessel during inspections at ports or from air and sea surveillance activities as well as discussions with the owner and / or operator of the vessel (MMO, 2022a). There are occasions when fish are not subject to the RBS legislation and therefore are not represented within the MMO iFISH landings database, i.e. when purchases of first sale fish direct from a fishing vessel are wholly for private consumption, and less than 25 kilograms is bought per day.

14.5.4.3 Lack of recent landings statistics for EU (non-UK) fleets is also recognised as a data limitation; based on the most recent European Commission data call, more recent (from 2017 onwards) landings data is no longer available by ICES rectangle. Data at a scale of ICES division (the whole of the North Sea) is less useful to understand fishing activity specific to the area overlapping the Project.

14.5.4.4 Limitations of VMS data are primarily focused on the coverage being limited to vessels ≥15m for MMO data. It is important to be aware that where mapped VMS data may appear to show inshore areas as having lower (or no) fishing activity compared with offshore areas, this is not necessarily the case, because VMS data does not include vessels typically operating in inshore areas (which typically comprises vessels <15m in length). To assist in mitigating the risk of under-representing smaller inshore vessels, site-specific marine traffic survey data, comprising information on vessel movements gathered by AIS and radar, has been analysed alongside VMS data.

14.5.4.5 Fishing vessel route density data from the EMSA is based on AIS data, representing activity for vessels with AIS (≥15m in length). A limitation of AIS data is that it does not distinguish between steaming and active fishing; nevertheless, it provides corroboration for key fishing grounds and insight into transit routes to alternative fishing grounds.

14.5.4.6 Data limitations have been managed by ensuring accurate interpretation of the data and clear understanding of its scope, together with cross-referencing between data sources and consultation with the fishing industry. Confidential vessel plotter data has informed the impact assessment, alongside vital ground truthing through direct engagement with the industry and active fishers. As a result, the limitations identified are not considered to significantly affect the certainty or reliability of the impact assessments in **Sections 14.9**, **14.10** and **14.11**.

14.6 Baseline conditions

14.6.1 Current baseline

14.6.1.1 A high level summary of the commercial fisheries baseline environment is provided in the following Sections. Full details of the analysis undertaken to develop the Commercial Fisheries baseline is provided in **Volume 3, Appendix 14.1**.

Overview of landings

14.6.1.2 Landings over the period 2012-2023 are presented in **Volume 3, Appendix 14.1**. For the purposes of this summary of the baseline description, focus is given to the most recent datasets across a five-year period (2019-2023), with context for longer-term trends provided where relevant.

14.6.1.3 On average, £24.2 million in first sales value is landed from the commercial fisheries local study area, based on five-years from 2019-2023. Peak landings occurred in 2019 at a value of £35.2 million. The average annual value landed from the commercial fisheries regional study area is £71.1 million, also peaking in 2019 at £95.7 million (**Plate 14.1**; MMO, 2024).

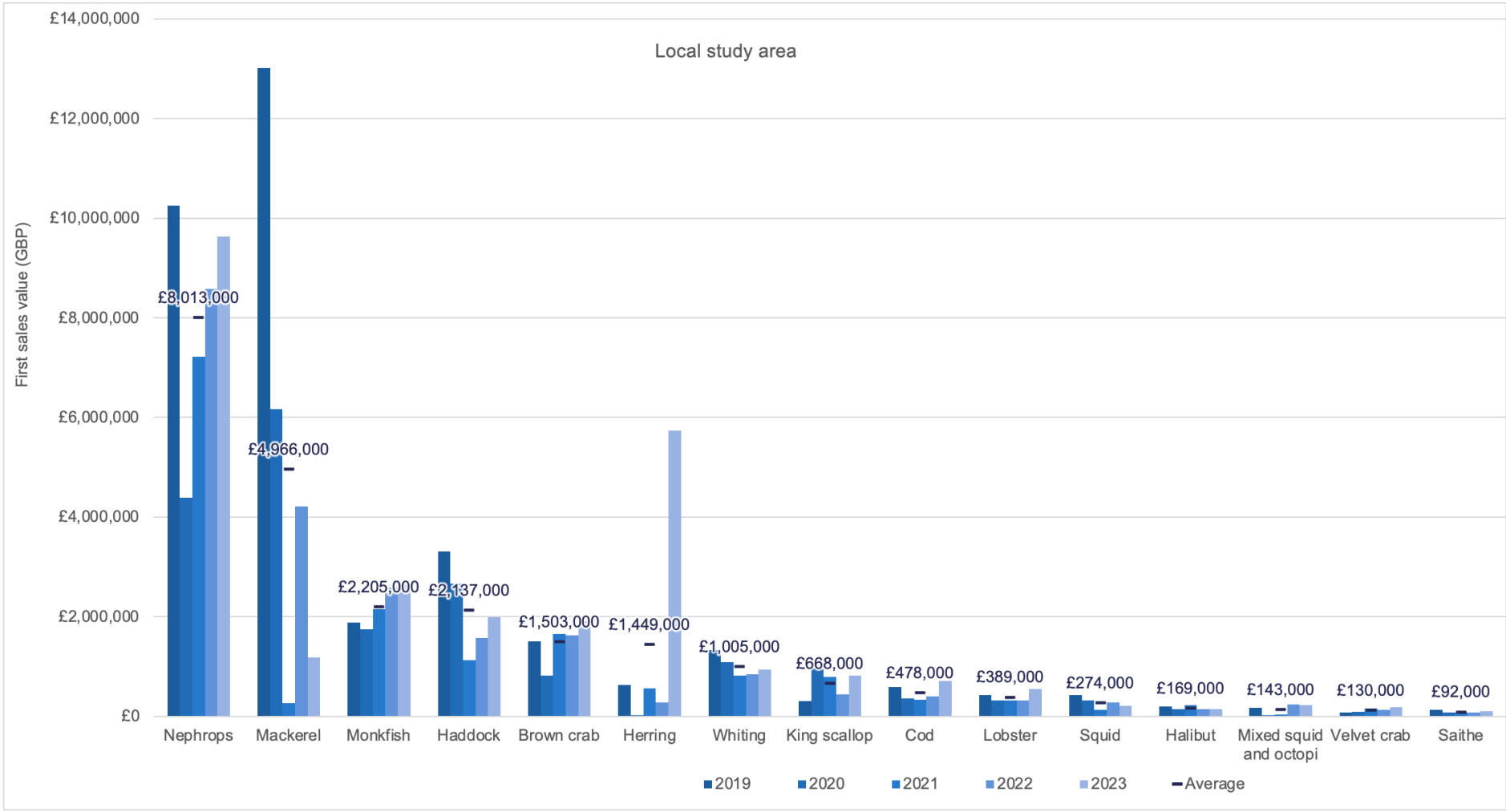
14.6.1.4 Trends in landings from the local commercial fisheries study area show a significant drop from 2019-2020 (by approximately £15 million), with landings dropping further in 2021 followed by an increase in 2022-2023. It is noted that the time period of the baseline data analysis includes years impacted by COVID-19, specifically 2020 and 2021 when restrictions affected normal business operations and market trade. Landings at a national level were seen to decline over this period. For example, the total first sales value of commercial landings Scottish vessels decreased from a high of £735 million in 2016, to a low of £520 million in 2020 due to the impacts of COVID-19 (Marine Directorate, 2023). The total value landed by Scottish vessels has since increased, reaching £617 million in 2022.

Plate 14.1 Annual landed value from the commercial fisheries regional study area indicating landings from the local study area and from the other ices rectangles within the regional study area (data source: MMO, 2024)

14.6.1.5 The key species landed from the local commercial fisheries study area are Nephrops, mackerel, monkfish, haddock, brown crab, herring, whiting, and king scallop, (**Plate 14.2**). In the wider regional commercial fisheries study area, landings are dominated by similar species to those in the local commercial fisheries study area; landings of mackerel and herring feature more prominently.

14.6.1.6 Within the commercial fisheries local study area, demersal otter trawls consistently accounted for the highest first sales value between 2019 and 2023, averaging approximately £14.4 million annually and peaking at nearly £19 million in individual years (**Plate 14.3**). Pelagic trawls represented the second highest value fishery, averaging around £4.7 million per year. Pots and traps, pelagic seine and demersal seine contributed moderate values (approximately £2.0 million, £1.8 million and £0.7 million respectively), while dredge and handlines contributed lower values (around £0.7 million and £0.2 million). Longlines and beam trawl contributed low values. This indicates that demersal otter trawling is the dominant and most economically important fishing activity within the local study area.

Plate 14.2 Annual landed value (£) of key species from the local commercial fisheries study area from 2019 to 2023 (data source: MMO, 2024)



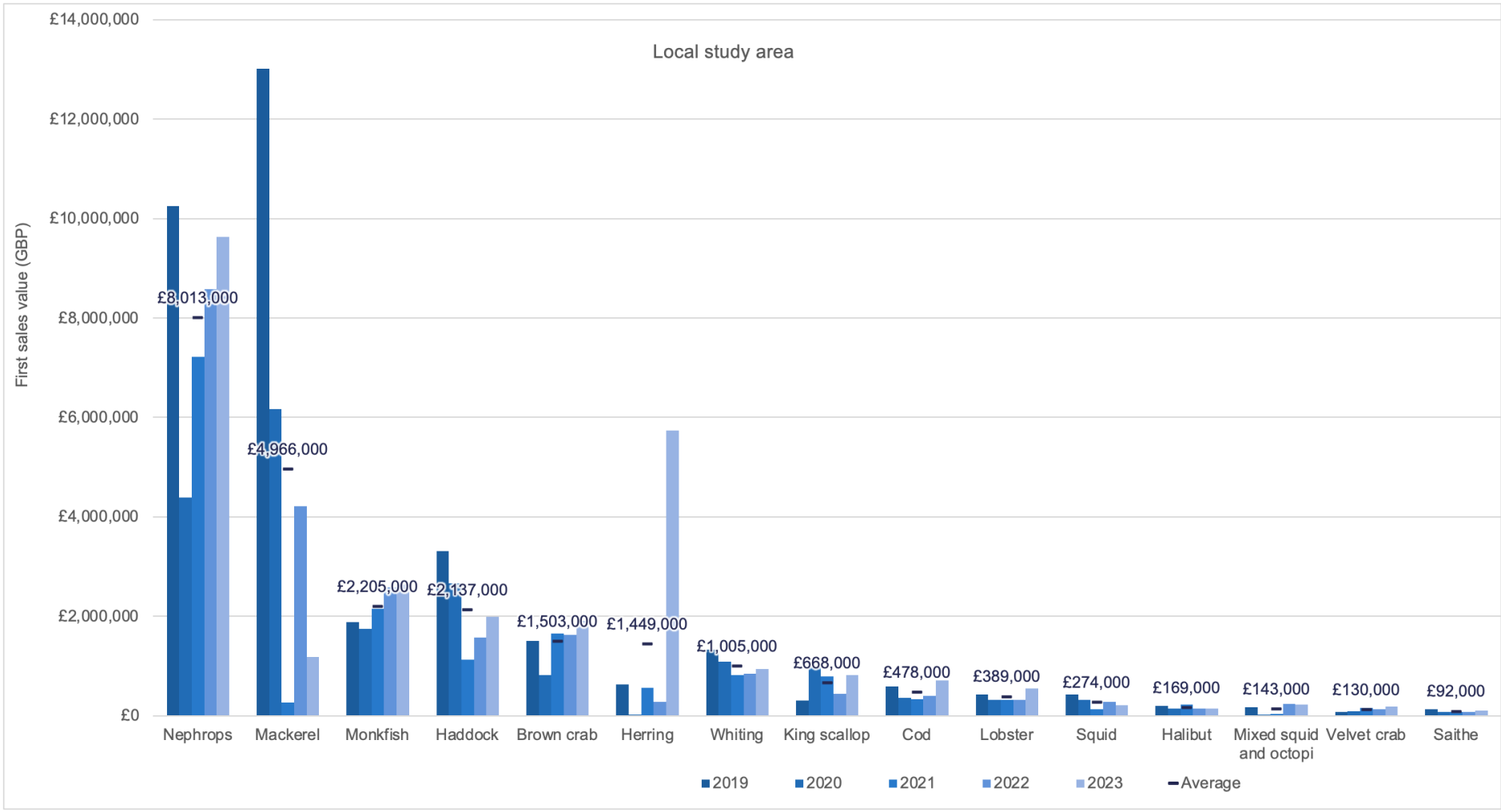
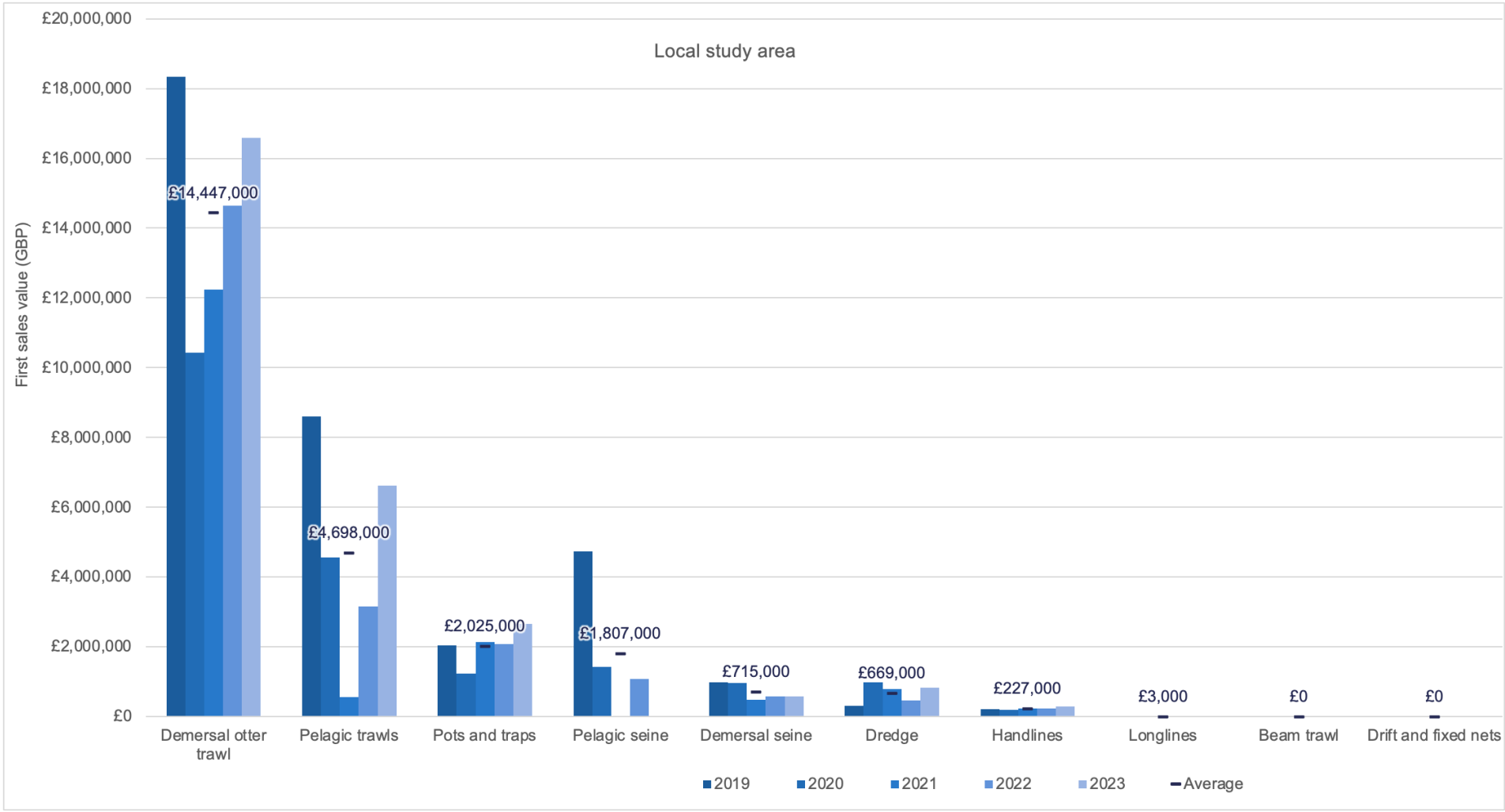
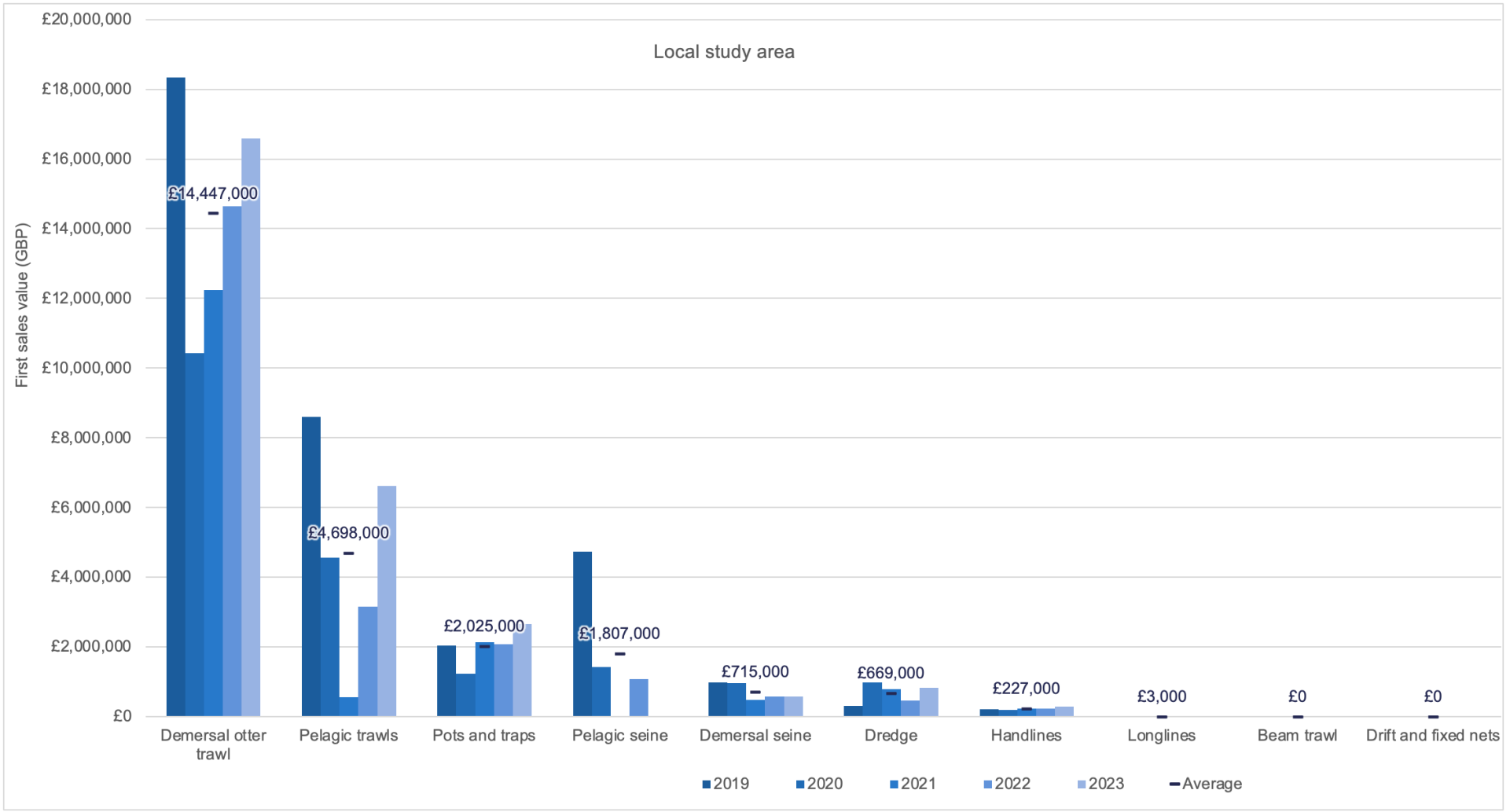

Local study area
First sales value (GBP)
£14,000,000
£12,000,000
£10,000,000
£8,000,000
£6,000,000
£4,000,000
£2,000,000
£0
£8,013,000
£4,966,000
£2,205,000
£2,137,000
£1,503,000
£1,449,000
£1,005,000
£668,000
£478,000
£389,000
£274,000
£169,000
£143,000
£130,000
£92,000
Nephrops
Mackerel
Monkfish
Haddock
Brown crab
Herring
Whiting
King scallop
Cod
Lobster
Squid
Halibut
Mixed squid and octopi
Velvet crab
Saithe
2019
2020
2021
2022
2023
Average

Plate 14.3 Annual landed value (£) by gear type from the local commercial fisheries study area, based on 5-year average from 2019 to 2023 (Source: MMO, 2024)




Local study area
First sales value (GBP)
£20,000,000
£18,000,000
£16,000,000
£14,000,000
£12,000,000
£10,000,000
£8,000,000
£6,000,000
£4,000,000
£2,000,000
£0
£14,447,000
£4,698,000
£2,025,000
£1,807,000
£715,000
£669,000
£227,000
£3,000
£0
£0
Demersal otter trawl
Pelagic trawls
Pots and traps
Pelagic seine
Demersal seine
Dredge
Handlines
Longlines
Beam trawl
Drift and fixed nets
2019
2020
2021
2022
2023
Average

Fishing activity by gear type

14.6.1.7 **Table 14.6** provides a summary of fishing fleets active in the study areas.

Demersal otter trawl and demersal seine fisheries

14.6.1.8 The demersal otter trawl fishery targets two distinct fisheries:

- haddock, whiting and mixed finfish species (targeted by demersal trawl TR1 and demersal seine); and
- Nephrops (targeted by demersal trawl TR2).

14.6.1.9 The demersal otter trawl / seine fisheries account for £15.2 million first sales value landed annually from the local study area. In the context of total landings from the local study area, the demersal trawl / seine fisheries account for 62% of the landed value.

14.6.1.10 The Nephrops fishery accounts for 33% of the total value of landings associated with the demersal otter trawl fishery in the local study area. Nephrops are primarily targeted in ICES rectangles 45E9; which overlaps the OAA and a portion of the offshore export cable corridor. Consultation with fishing industry stakeholders has identified a portion of the OAA along its easternmost boundary is targeted by the Nephrops fishery.

14.6.1.11 The monkfish, haddock and mixed demersal fishery is targeted throughout the local study area. Consultation with fishing industry stakeholders has identified a portion of the OAA through its centre running north to south, adjacent to an existing pipeline, as important grounds for the demersal finfish fishery. This area is specifically targeted by pair trawlers, whereby one net is operated across two vessels.

14.6.1.12 Spatial data for demersal otter trawl and demersal seine activity is presented in **Volume 3, Appendix 14.1**. It indicates that demersal otter trawling takes place along and within the eastern boundary of the OAA and within the central section of the OAA. Levels of demersal seine activity in the Project boundaries are relatively low.

14.6.1.13 Landings by demersal otter trawl and demersal seine vessels occur year-round, peaking in summer months and are principally made into Peterhead, Fraserburgh and Macduff.

Pelagic trawl and purse seine fishery

14.6.1.14 The pelagic trawl and purse seine fishery primarily targets mackerel with fishing activity only taking place in October and November, and accounts for an average of £6.5 million first sales value landed annually from the local study area. The pelagic fleet includes both pelagic trawl and purse seine nets. Spatial data indicates very limited overlap of pelagic trawl activity with the OAA, on the eastern boundary.

14.6.1.15 Landings by the pelagic fleets are primarily made into Peterhead, Lerwick, Hirtshals, Killybegs and Egersund.

Potting fishery

14.6.1.16 The potting fishery primarily targets brown crab, lobster and velvet crab and accounts for £2 million first sales value landed annually from the local study area.

14.6.1.17 In the local study area, activity is focused in the inshore areas from 0nm-3nm and 85% of landings are attributed to inshore ICES rectangles 44E8 and 45E8.

14.6.1.18 Landings by potting vessel are made into Fraserburgh, Peterhead, Boddam and Macduff. Crabs are caught year round, with landings peaking in December and January; and lobster are targeted mainly from July to December with landings peaking in August.

Scallop dredge fishery

14.6.1.19 The scallop dredge fishery primarily operates in ICES rectangle 44E8, with spatial data indicating that the inshore portion of the offshore export cable corridor, between 3nm and 12nm overlaps scallop grounds.

14.6.1.20 The scallop dredge fishery accounts for £670,000 first sales value landed annually on average from the local study area.

14.6.1.21 Landings by scallop dredge vessels are made into Fraserburgh and Peterhead. Scallops are targeted seasonally from May to September with peak landings in early summer.

Beam trawl fishery

14.6.1.22 Low levels of beam trawl activity are recorded across the local study area, with occasional landings of squid from ICES rectangle 44E8.

Hook and line fishery

14.6.1.23 The hook and line or jigging fishery primarily targets mackerel and accounts for £227,000 first sales value landed annually on average from the local study area.

14.6.1.24 In the local study area, activity is focused in the inshore areas from 0nm-3nm. Landings by vessel deploying lines / jigging gear are made into Fraserburgh, Peterhead and Boddam. Mackerel caught by line / jigging are targeted seasonally in July to September.

Fixed net fishery

14.6.1.25 Low levels of fixed net activity are recorded across the local study area, with occasional landings of haddock from ICES rectangle 44E8.

Table 14.6 Summary of fishing fleets active in the study areas, and identified as commercial fisheries EIA receptors

Fishing fleet	Target species	OAA	Offshore export cable corridor
UK fishing fleets			
UK demersal otter trawl	Nephrops, haddock, monkfish, squid.	Primarily Scottish registered vessels, over 15m length targeting Nephrops – high levels of activity in the local study area, with distinct area of greater activity in the east.	Primarily Scottish registered vessels, over 15m length – moderate to high levels of activity across the offshore export cable corridor.
UK pelagic trawl and purse seine	Mackerel, herring,	Scottish, English and Northern Irish registered vessels, over 40m length	Scottish, English and Northern Irish registered vessels, over 40m length

Fishing fleet	Target species	OAA	Offshore export cable corridor
		–low levels of activity at eastern boundary, primarily outside OAA.	– very low levels of activity.
UK potting	Brown crabs, lobsters, velvet crabs.	Scottish registered vessels, under and over 10m length – low levels of activity.	Scottish registered vessels, under and over 10m length – moderate to high levels of activity across the inshore section of the offshore export cable corridor.
UK dredge	King scallop.	No notable activity.	Primarily Scottish registered vessels, over 15m length – moderate to high levels of activity across the inshore section of the offshore export cable corridor.
UK beam trawl	Whitefish and flatfish species	No notable activity.	No notable activity.
UK demersal seine	Haddock, whiting.	Scottish registered vessels, over 15m length – low levels of activity.	Scottish registered vessels, over 15m length – variable levels of activity across the offshore export cable corridor.
UK jigging (hook and line)	Mackerel	No notable activity.	Scottish registered vessels, under 12m length – variable levels of activity across the inshore section of the offshore export cable corridor.
Non-UK fishing fleets			
Non-UK pelagic trawl	Mackerel, herring	Sporadic activity by vessels registered in Norway, Denmark, the Netherlands, Germany, France, Lithuania and Sweden.	Sporadic activity by vessels registered in Norway, Denmark, the Netherlands, Germany, France, Lithuania and Sweden.

14.6.2 Future baseline

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

14.6.2.2 Commercial fisheries patterns change and fluctuate based on a range of natural and management-controlled factors. These factors include the following:

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

14.6.2.3 A recent example of how fisheries management can change the baseline relates to sandeel; the sandeel fishery has significantly reduced in the UK EEZ over the past five years, with very low quotas relevant for the regional study area (i.e, sandeel area 4). It is noted that the UK Government has prohibited UK vessels from catching sandeel from the North Sea from the period 2021-2023. As of 2024, catching sandeel from the North Sea has been prohibited for all UK and non-UK vessels in the UK EEZ.

14.6.2.4 Another example of changing fisheries patterns relates to the recent prohibition of scallop dredging in the Dogger Bank Special Area of Conservation (SAC). Many of the UK scallop vessels that operate outside 12nm will target areas throughout the UK, including the central North Sea, English Channel, Irish Sea and West of Scotland. Restrictions on fisheries due to environmental management can displace the activity and also lead to higher reliance on existing grounds, including the local and regional study area. Displaced vessels are likely to deploy higher effort in grounds already fished and also undertake more exploratory fishing.

14.6.2.5 Another factor with potential to influence future fisheries patterns relates to the designation and management of offshore MPAs. The Scottish Government has recently published a set of fisheries management measures that apply across offshore MPAs (waters between 12nm-200nm). These take effect from 16 October 2025. The introduction of spatial management measures within offshore MPAs can place restrictions on certain fishing gears

or activities to protect sensitive habitats or species. Such measures have the potential to displace fishing effort from restricted areas to other grounds, including those within the local and regional study area. Displacement can lead to increased fishing pressure on remaining accessible grounds, heightening competition between fleets and potentially increasing the risk of gear conflict. It may also prompt exploratory fishing in new areas, altering established patterns of activity and contributing to changes in the commercial fisheries baseline over time.

14.6.2.6 The variations and trends in commercial fisheries activity are an important aspect of the baseline assessment and forms the principal reason for considering up to 13 years of key baseline data. Given the time periods assessed, the future baseline scenario would typically be reflected within the current baseline assessment undertaken. However, in this case, existing baseline data do not fully capture potential changes in commercial fisheries activity resulting from the withdrawal of the UK from the EU.

14.6.2.7 Following the UK's withdrawal from the EU, the UK and the EU have agreed to a Trade and Cooperation Agreement (TCA), applicable on a provisional basis from 01 January 2021. The TCA sets out fisheries rights and confirms that from 01 January 2021, and during a transition period until 30 June 2026, UK and EU vessels will continue to access respective EEZs (12nm-200nm) to fish. In this period, EU vessels will also be able to fish in specified parts of UK waters between 6nm-2nm.

14.6.2.8 25% of the EU's fisheries quota in UK waters will be transferred to the UK over the five-year transition period; most of this quota has already been transferred and distributed across the four nations of the UK. After the five-year transition there will be annual discussions on fisheries opportunities. The TCA gradually reduces EU fishing opportunities for 55 shared stocks from 2021-2026 though most of the total reduction in EU fishing quota shares comes from a limited number of fish stocks. Of relevance to the North Sea, the greatest reduction in EU quota is associated with species including those targeted in the commercial fisheries study areas, namely herring, mackerel and Nephrops (European Parliamentary Research Service, 2022).

14.6.2.9 Market changes have the potential to impact fishing activity in the regional commercial fisheries study area; some of the catch landed by UK vessels is exported to EU markets (for example, brown crab) and potential tariff / non-tariff barriers could affect which species are targeted and to what extent.

14.6.2.10 Understanding of the likely evolution of the future baseline has been informed by engagement with fishing industry stakeholders, which has indicated that the small haddock fishery targeted not specifically across the Project, but within the wider commercial fisheries study area, may become more important based on improved processing facilities and potential for increased quota due to the UK's withdrawal from the EU. The assessment has therefore assumed that a resumption or expansion of the haddock fishery could occur, particularly within the footprint of demersal trawl activity, and that fishing effort targeting haddock may increase in the future. In response, the assessment considers a future baseline that includes potential growth in haddock catches within the regional study area, ensuring that potential impacts are evaluated in the context of evolving fisheries activity.

14.6.2.11 In relation to the effects of the COVID-19 pandemic, MMO annual reporting notes that the effects of the pandemic on the UK fishing industry were felt from March 2020. The MMO UK Sea Fisheries Statistics 2021 report observes that an increase in overall UK landings quantity and value in 2021 (relative to 2020) largely reflected recovery from the COVID-19 pandemic period and additional quota available to the UK fleet after leaving the EU (MMO, 2022). In light of these industry-wide disruptions and subsequent recovery, an extended baseline period from 2010-2023 has been used to ensure that longer-term trends, short-term anomalies, and structural changes in the fishing sector are adequately captured and reflected in the assessment.

14.6.2.12 Commercial fisheries receptors (i.e., relevant fishing fleets) could theoretically be impacted by climate change over the lifetime of the Project. Increased sea temperature and changes in pH levels have the potential to affect the distribution of commercially targeted fish and shellfish stocks in the regional and local commercial fisheries study areas. Scientific research to date indicates the following for key commercially targeted species (Nunez-Riboni *et.al*., 2019; OSPAR, 2023; European Environment Agency, 2024; and Pinnegar, 2022):

- Of relevance to the Nephrops fishery, most shellfish are sedentary but have a high tolerance to changes in temperature. Some warming in this part of the North Sea is unlikely to significantly impact this target species.
- Any evidence around scallops and how changes in temperature will impact upon them is varied and not conclusive.
- For white fish fisheries, such as those targeting haddock, climate change could have a large impact via warming sea, in turn reducing the area within the North Sea that is suitable for these fish species. This could cause fish to migrate further north, making areas of the northern North Sea more important as a fishery.

14.6.2.13 Given the complexity of climate systems and variability in species-specific responses, it is very difficult to predict with certainty how and to what extent climate change will alter commercial fisheries over the lifetime of the Project. This uncertainty reinforces the need for a longer-term data series, such as the 2013-2023 baseline used in this assessment, to ensure that both gradual and abrupt changes in fisheries activity and stock distribution can be captured. It also supports the inclusion of plausible future scenarios, such as the potential for increased haddock catches, within the future baseline and impact assessment.

14.6.2.14 Changes in the distribution of target species may in turn affect commercial fishing activity in the regional and local commercial fisheries study areas over the phases of the Project; for example, altering fishing methods, targeted grounds and seasonal patterns in activity.

14.6.2.15 An increase in storm events may also directly impact fishing activity in the commercial fisheries study areas, with changes with seasonal fishing patterns in response to changes in weather and periods of safe fishing conditions.

14.6.2.16 In summary, commercial fisheries trends are dynamic and influenced by a range of environmental, economic and regulatory drivers, resulting in natural fluctuations and structural changes over time. To account for this variability, the assessment has used over a decade of fisheries data (2013-2023) to establish a comprehensive baseline and to capture longer-term trends alongside shorter-term anomalies. Consideration of plausible future changes, including shifts in target species, management measures, market factors and climate-driven effects, has been incorporated within the assessment. This approach ensures that the baseline characterisation is robust and that the assessment reflects the likely evolution of commercial fisheries activity over the lifetime of the Project.

14.7 Basis for Environmental Impact Assessment Report

14.7.1 Maximum design scenario

14.7.1.1 The Applicant has adopted a design envelope approach to impact assessment (also known as a 'Rochdale Envelope'). In line with guidance from the Scottish Government, the design envelope approach offers flexibility in the EIA process by enabling impact assessment to be carried out against several potential design options.

14.7.1.2 The assessment of commercial fisheries impacts has been undertaken with respect to the details provided in **Chapter 4: Project Description**. A maximum design scenario has been selected for each impact which would lead to the greatest impact for all receptors or receptor groups, when selected from a range of values. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within **Chapter 4: Project Description** (for example, different infrastructure layout), to that assessed here, be taken forward in the final design scheme.

14.7.1.3 The maximum design scenario for impacts on commercial fisheries is provided in **Table** 14.7.

Table 14.7 Maximum design scenario for impacts on commercial fisheries

Impact / activity	Maximum design scenario parameter	Justification
Construction		
Impact C1: Reduction in access to, or exclusion from established fishing grounds within the OAA	• construction stage to last up to 12 years; and • total OAA area: 684km^2. **Safety zones:** • 500m safety zones around construction activities; • 50m safety zones around partially complete structures or complete structures; and • 500m rolling advisory safe operating distance around cable laying vessel. **Wind turbine generator (WTG):** • up to 225 WTGs (based on 14MW); • 800m spacing between other WTGs; • 8 mooring lines per floating unit equalling a total of 1,800 mooring lines; • mooring concepts: catenary. • mooring line radius: 800m; 2.011km^2 mooring footprint per WTG; assuming 225 WTGs total is 452km^2 total mooring footprint. • semi-submersible floating unit max dimension: 100m x 120m; • anchor type: drag embedment[1] fully buried (breadth 12.5m). 300m drag length. Seabed impact of 3,750m^2 per anchor; and • total anchor disturbance (assuming 225 WTGs, each with 8 anchors) is 6.75km^2. **Array cables:** • 225 array cables;	The design scenario represents the maximum duration and extent of fishing exclusion throughout the construction stage and, hence, the greatest potential to restrict access to fishing grounds. It is assumed that construction activities could occur anywhere within the OAA at any given time. This is a conservative assumption for the purposes of EIA. It is assumed that fishing is not prohibited from resumption but is unlikely to resume within the OAA due to the presence of mooring lines within the water column, anchors and WTG floating units deployed throughout the construction stage making access not practically feasible. It is assumed that the fishing effort that would otherwise have taken place within the OAA is not removed entirely, but partially displaced to surrounding area, as assessed in Impact C3.

[1] Should the drag embedment end point be out of tolerance then it would be required to lift the anchor and re-lay increasing the seabed displacement by the same amount. At the design stage, it is not possible to accurately determine the level of installation failure or damage when laying the anchors. There will remain a residual risk that some anchors may need to be re-laid as they are out of tolerance or moved during service. This will depend on seabed conditions and other factors associated with offshore operations of the install vessels.

Impact / activity	Maximum design scenario parameter	Justification
	• 680km total array cable length; • assumed jet trenching installation method as worst-case for sediment mobilisation with 30m disturbance width; • temporary construction footprint assumed 100% of total array cable length is buried by jet trenching; 680km x 0.03km = 20.4km$^{2;}$ and • maximum burial of 2m. **Subsea distribution centres (SDC):** • up to 45 SDCs with gravity base foundations • dimensions of the SDC (including any cable protection / growth required outwith the structure dimensions) 58m x 48m; • construction footprint is 2,784m^2 per SDC and total 125,280m^2 for 45 SDCs. **Offshore substations:** • 4 offshore substations with jacket foundations secured with suction caisson; • offshore substation construction footprint: 130m x 110m = 14,300m^2 per offshore substations; and • total construction footprint is 57,200m^2 for four offshore substations. **OAA cable crossings:** 6 cable crossings per trench within the OAA with construction footprint of 170m x 30m = 5,100m^2, total of 153,000m^2 for 6 cable crossings for 5 cable trenches.	
Impact C2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor	• construction stage to last up to 12 years. **Offshore export cable corridor:** • up to 5 offshore export cable trenches (these may include more than one cable per trench); • 140km offshore grid transmission route length per trench (depending on the offshore substation and landfall(s) locations(s)); • up to 30m cable trench disturbance width;	The design scenario represents the maximum duration and extent of fishing exclusion throughout the construction stage and, hence, the greatest potential to restrict access to fishing grounds. It is assumed that construction activities would not occur across the entirety of the offshore

Impact / activity	Maximum design scenario parameter	Justification
	• temporary construction footprint assumed 100% of total export cable length is buried by jet trenching of 140km x 0.03km = 4.2km^2 per cable; • total construction footprint is 21km^2 for five cables; • maximum seabed footprint (including cable protection): 140km x 0.015km = 2.1km^2 per cable trench and total 10.5km^2 for 5 cable trenches; and • maximum burial of 2m. **Offshore export cable corridor cable crossings:** • 22 cable crossings along the offshore export cable corridor with construction footprint of 170m x 30m =5,100m^2, total of 561,000m^2 for 22 cable crossings for 5 cable trenches. **Reactive compensation platform (RCP) for HVAC (only):** • 2 RCPs with jacket foundations secured with suction caisson; construction footprint: 85m x 85m = 7,225m^2 (per RCP); and • total construction footprint is 14,450m^2 for 2 RCP's.	export cable corridor at any one time i.e. exclusion relates to the advisory safety zones. It is assumed that fishing is not prohibited from resumption in areas where construction has not yet commenced or is completed. It is assumed that 500m advisory safe passing distances will be in place where construction activities are ongoing, including areas of cable that require subsequent cable protection.
Impact C3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	Refer to Impact C1 and Impact C2.	The design scenario represents the maximum duration and extent of fishing exclusion throughout the construction stage and, hence, the greatest potential to lead to displacement of fishing effort.
Impact C4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	As described in **Chapter 10: Benthic, Epibenthic and Intertidal Ecology** and **Chapter 13: Fish Ecology**.	The design scenario for fish and shellfish ecology receptors represents the maximum potential disturbance to commercial fisheries resources.
Impact C5: Increased vessel traffic associated with the Project within fishing	Maximum vessel movement scenario, calculated as 3,838 vessel transits (each representing a one-way journey between port and worksite (offshore export cable corridor, OAA).	The maximum number of WTGs and associated infrastructure will lead to the highest level of

Impact / activity	Maximum design scenario parameter	Justification
grounds leading to interference with fishing activity		construction activities and therefore highest level of construction vessel round trips. The maximum number of vessel transits and the maximum duration of the construction would result in the greatest potential for interference.
Impact C6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project	Refer to Impact C1 and Impact C2.	The design scenario represents the maximum duration and extent of fishing exclusion (and thus need for steaming to alternative fishing grounds) throughout the construction stage and, hence, the greatest potential for additional steaming to alternative fishing grounds.
Impact C7: Increased snagging risk, which could result in loss or damage to fishing gear	Refer to Impact C1 and Impact C2.	The design scenario represents the maximum number and extent of project infrastructure being constructed and, hence, the greatest potential for gear snagging to occur.
O&M		
Impact O1: Reduction in access to, or exclusion from established fishing grounds within the OAA	• operational stage for 35 years per phase; and • total OAA area: 684km^2. **Safety zones:** 500m safety zones around major maintenance activities. **Wind turbine generator (WTG):** • up to 225 WTGs (based on 14MW); • 800m spacing between other WTGs; • 8 mooring lines per floating unit equalling a total of 1,800 mooring lines; • mooring concepts: catenary. • semi-submersible floating unit max dimension: 100m x 120m;	The design scenario represents the maximum duration and extent of fishing exclusion throughout the O&M stage and hence the greatest potential to restrict access to fishing grounds. It is assumed that fishing is not prohibited from resumption but is unlikely to resume within the OAA throughout the O&M stage. It is assumed that the fishing effort that would otherwise have taken place within the OAA is not removed entirely, but partially displaced to surrounding area, as assessed in Impact O3.

Impact / activity	Maximum design scenario parameter	Justification
	• mooring line radius: 800m; 2.011km^2 mooring footprint per WTG; assuming 225 WTGs - 452km^2 total mooring footprint. **Array cables:** • 225 array cables; • secondary protection rock placement, localised: concrete mattresses and bags; • 680km total array cable length; • 136km length of unburied cable; • conservative cable corridor swathe width of 15m assumed for areas of cable protection, and • maximum total area of seabed covered by cable protection based on conservative 136km x 0.015km = 2.04km^2; and • target burial of 1m to 2m. **Subsea distribution centres (SDC):** • 45 SDCs; • assumed worst-case is gravity base foundations; and • dimensions of SDC including cable protection: 38m x 28m, footprint is 1,064m^2 and total 47,880m^2 for 45 SDCs. **Offshore substations:** • 4 offshore substations with jacket foundations secured by suction caisson • maximum seabed footprint (including scour protection): 110m x 90m, footprint is 9,900m^2 and total 39,600m^2 for 4 offshore substations. **OAA cable crossings:** • 6 cable crossings per trench within the OAA with construction footprint of 150m x 11m = 1,650m^2, total of 49,500m^2 for 6 cable crossings for 5 cable trenches. **Maintenance activities include:** • maintenance of WTGs; • maintenance of floating units;	

Impact / activity	Maximum design scenario parameter	Justification
	• replacement or repair mooring line components; • replacement or repair of array cables; • replacement of mooring or anchors using same process as construction; • SDCs and subsea substations includes routine inspections, cable and scour protection repair / replacement; • offshore substation: routine inspections; • removal of marine growth; • cable repair by recovering the cable from its trench / water column and making the necessary repairs; • reburial of section of cable that have become exposed; • ancillary equipment repair; • replacement of cable protection over sections of the cable identified as in need of protection; and	
Impact O2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor	• operational stage of 35 years per phase. **Offshore export cable corridor:** • 5 offshore export cable trenches; • 140km offshore grid transmission rout length per trench; • conservative cable corridor swathe width of 15m assumed for areas of cable protection; • maximum seabed footprint (including cable protection): 140km x 0.015km = 2.1km^2 per cable trench and total 10.5km^2 for 5 cable trenches; and • maximum burial of 2m. **Offshore export cable corridor cable crossings:** • 22 cable crossings along the offshore export cable corridor with construction footprint of 150m x 11m = 1,650m^2, total of 181,500m^2 for 22 cable crossings for 5 cable trenches. **Reactive compensation platform (RCP) for HVAC (only):** • up to 2 RCPs with jacket foundations secured by suction caisson, connected via bridge link with a maximum dimension of 250m x 50m;	Given the burial of the offshore export cables, it is assumed that fishing will resume throughout the O&M stage, with the exception of in safety zones around major maintenance activities. The design scenario represents the maximum duration and extent of fishing exclusion throughout the O&M stage and hence the greatest potential to restrict access to fishing grounds.

Impact / activity	Maximum design scenario parameter	Justification
	• maximum seabed footprint (including scour protection): 65m x 65m = 4,225m^2 and total 8,450m^2. **Maintenance activities include:** • routine inspections; • cable repair by recovering the cable from its trench / water column and making the necessary repairs; • reburial of section of cable that have become exposed; • ancillary equipment repair; • replacement of cable protection over sections of the cable identified as in need of protection; and • RCP: routine inspections.	
Impact O3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	Refer to Impact O1 and O2.	The design scenario represents the maximum duration and extent of fishing exclusion throughout the O&M stage and, hence, the greatest potential to lead to displacement of fishing effort.
Impact O4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	As described in **Chapter 10: Benthic, Epibenthic and Intertidal Ecology** and **Chapter 13: Fish Ecology**.	The design scenario for fish and shellfish ecology receptors represents the maximum potential disturbance to commercial fisheries resources.
Impact O5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity	Peak of up to 7 O&M vessels offshore with up to 364 round trips to port per year.	The maximum number of WTGs and associated infrastructure will lead to the highest level of maintenance activities and therefore highest level of maintenance vessel round trips.
Impact O6: Additional steaming to alternative fishing grounds for vessels	Refer to Impact O1 and O2.	The design scenario represents the maximum duration and extent of fishing exclusion (and thus need for steaming to alternative fishing

Impact / activity	Maximum design scenario parameter	Justification
that would otherwise fish within the Project		grounds) throughout the O&M stage and, hence, the greatest potential for additional steaming to alternative fishing grounds.
Impact O7: Increased snagging risk, which could result in loss or damage to fishing gear	Refer to Impact O1 and O1.	The design scenario represents the maximum number and extent of project infrastructure and, hence, the greatest potential for gear snagging to occur.
Decommissioning		
Impact D1: Reduction in access to, or exclusion from established fishing grounds within the OAA	The maximum design scenario will be equal to (or less than) that of the construction stage. Refer to Impact C1.	Refer to Impact C1 justification.
Impact D2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor	The maximum design scenario will be equal to (or less than) that of the construction stage. Refer to Impact C2.	Refer to Impact C2 justification.
Impact D3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	The maximum design scenario will be equal to (or less than) that of the construction stage. Refer to Impact C3.	Refer to Impact C3 justification.
Impact D4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	The maximum design scenario will be equal to (or less than) that of the construction stage. Refer to Impact C4.	Refer to Impact C4 justification.
Impact D5: Increased vessel traffic associated with the Project within fishing	The maximum design scenario will be equal to (or less than) that of the construction stage. Refer to Impact C5.	Refer to Impact C5 justification.

Impact / activity	Maximum design scenario parameter	Justification
grounds leading to interference with fishing activity		
Impact D6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project	The maximum design scenario will be equal to (or less than) that of the construction stage. Refer to Impact C6.	Refer to Impact C6 justification.
Impact D7: Increased snagging risk, which could result in loss or damage to fishing gear	The maximum design scenario will be equal to (or less than) that of the construction stage. Refer to Impact C7.	Refer to Impact C7 justification.

14.7.2 Embedded environmental measures

14.7.2.1 As part of the Project design process, a number of embedded environmental measures have been adopted to reduce the potential for adverse impacts on commercial fisheries. These embedded environmental measures have evolved over the development process as the EIA has progressed and in response to consultation.

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

14.7.2.3 **Table 14.8** sets out the relevant embedded environmental measures within the design and how these affect the commercial fisheries assessment.

14.7.2.4 Further detail on the embedded environmental measures in **Table 14.8** is provided in the **Volume 3, Appendix 5.2: Commitments Register**, which sets out how and where particular embedded environmental measures will be implemented and secured.

Table 14.8 Relevant commercial fisheries embedded environmental measures

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to commercial fisheries assessment
M-029	An **Outline Cable Plan** has been submitted within this Application (**Volume 4**), and includes details of the need, type, quantity and installation methods for cabling. A Final Cable Plan will be completed prior to construction commencing and submitted to MD-LOT for approval. The Final Cable Plan will include: a) the vessel types, location, duration and cable laying techniques for export and array cables; b) the finalised location of the export cable route; c) the results of monitoring or data collection work (including geophysical, geotechnical and benthic surveys); d) technical specification of the cables, including a desk based assessment of attenuation of electromagnetic field strengths and shielding; e) a CBRA, to ascertain burial depths and where necessary alternative protection measures; f) methods to be used to mitigate the effects of EMF; g) methodologies and timetable for post-construction and operational surveys (including inspection, over trawl, post-lay) for the cables through its operational life; h) measures to address and report to the Licensing Authority any exposure of cables or risk to users of the sea from cables; and g) methodologies for cable inspection with measures to address and report to Scottish Ministers, any exposure of array cables.	Scoping Amended at EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as cable location, burial and protection methods influence seabed access and reduce the risk of gear snagging, helping to minimise disruption to fishing activity.

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to commercial fisheries assessment
M-030	Advance 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 Bulletins.	Scoping Amended at EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as clear communication of activities allows fishers to plan operations safely and avoid conflict with Project vessels and infrastructure.
M-031	A **Safety Zone Statement** has been submitted with this Application. An application for and use of rolling Safety Zones of up to 500m during construction and O&M stages will be submitted to MD-LOT for approval. No permanent operational safety zone is proposed. The safety zone application will include the following: - pre-commissioning safety zones: 50m - construction stage: 500m safety zones around active construction works and evidenced by the presence of a construction vessel; - construction stage: 50m safety zones around partially or fully completed structure prior to the overall wind farm commissioning; and - O&M stage: 500m safety zone around the site of major maintenance works. No safety zones are currently proposed for the decommissioning stage, a separate application would be made prior to decommissioning where considered necessary. 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 that poses a risk to surface navigation during construction, maintenance and decommissioning stages. Such impacts may include	Scoping Amended at EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as safety zones reduce collision risk between fishing and Project vessels and help manage spatial interactions with fishing operations.

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to commercial fisheries assessment
	partially installed structures or cables, extinguished navigation lights or other unmarked hazards.			
M-038	An **Outline Lighting and Marking Plan** (LMP) has been submitted with this Application (**Volume 4**). The Final LMP will be completed prior to construction commencing and submitted to MD-LOT for approval. The LMP will confirm compliance with Northern Lighthouse Board requirements and in Line with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Recommendation G1162 (IALA, 2021) with regards to shipping, navigation and aviation marking and lighting during construction and operational and maintenance stage of the works.	Scoping Amended at EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as clear marking of structures improves navigational safety for fishing vessels operating near the site.
M-039	An **Outline Vessel Management and Navigational Safety Plan** has been submitted with this Application (**Volume 4**). The Final Vessel Management and Navigation Safety Plan will be completed prior to construction commencing and submitted to Marine Directorate Licensing Operations Team (MD-LOT) for approval. The Final Plan will: a) confirm the types and numbers of vessels that will be engaged on the Project; b) consider vessel coordination including indicative transit route planning; d) describe measures put in place by the Project related to navigational safety, including information on Safety Zones, charting construction buoyage, temporary lighting and marking; and e) provide a means of notification of Project activity to other sea users (e.g. via Notice to Mariners).	Scoping Amended at EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as safety zones reduce collision risk between fishing and Project vessels and help manage spatial interactions with fishing operations.

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to commercial fisheries assessment
M-048	An **Outline Fisheries Mitigation, Monitoring and Communication Plan** (FMMCP) has been submitted with this Application (**Volume 4**). The Final FMMCP will be completed prior to construction commencing and submitted to MD-LOT for approval. The Final FMMCP will set out the means of ongoing fisheries liaison through the construction and O&M stages of the Project and detail any mitigation measures to be put in place to limit effects on commercial fisheries activity. This will include the following Project policies: Fisheries Liaison Policy and Engagement Schedule, Conflict Avoidance Policy and Incident Response Policy.	Scoping Amended at EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as it ensures ongoing engagement, monitoring of impacts and development of mitigation to minimise disruption to fishing activity.
M-049	An **Outline Project Environmental Monitoring Programme** (PEMP) has been submitted with this Application (**Volume 4**). The Final PEMP will be completed prior to construction commencing and submitted to MD-LOT for approval. The Final PEMP will set out commitments to environmental monitoring in pre-, during and post-construction stages of the Project.	Scoping Amended at EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as monitoring environmental conditions can identify indirect effects on target species or habitats important to fisheries.
M-050	Any objects dropped on the seabed during works associated with the Project will be reported and objects will be recovered where they pose a hazard to other marine users and where recovery is possible.	Scoping	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as removal of seabed obstructions reduces the risk of gear snagging and associated safety and economic impacts on fishing vessels.
M-051	Participation in fisheries working group(s) will occur to assist with liaison between the Project and the fishing community.	Scoping	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as it provides a forum for collaboration, issue resolution and two-way communication

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to commercial fisheries assessment
				between the Project and fishing industry.
M-052	Adherence to best practice guidance will occur with regards to fisheries liaison and procedures in the event of interactions between the Project and fishing activities (for example, FLOWW, 2014, 2015, 2025).	Scoping	s.36 conditions and marine licence conditions.	Relevant to commercial fisheries as adherence to guidance helps avoid conflict and supports safe co-existence with fishing operations.
M-053	Appointment of a Company Fisheries Liaison Officer (CFLO). The CFLO will support ongoing liaison and ensure clear communication between the Project and commercial fisheries during design, pre-construction, construction, O&M and decommissioning.	Scoping Amended at EIA Report.	s.36 conditions and marine licence conditions.	Relevant to commercial fisheries as a dedicated liaison officer facilitates clear communication and timely resolution of issues with the fishing industry.
M-054	A detailed CBRA will be undertaken to enable informed judgements about burial depth. This should reduce the risk of buried cables reemerging whilst also limiting the amount of sediment disturbance to that which is necessary. The array and export cables will typically be buried at a target burial depth between 1-2m below the seabed surface. The final depth of the cable will be dependent on the seabed mobility and CBRA. The CBRA will manage and mitigate risks from loading and sediment transport across the seabed. The CBRA will be included within the Final Cable Plan.	Scoping Amended at EIA Report.	s.36 conditions and marine licence conditions.	Relevant to commercial fisheries as cable location, burial and protection methods influence seabed access and reduce the risk of gear snagging, helping to minimise disruption to fishing activity.
M-106	The development of and adherence to a Decommissioning Programme. The Decommissioning Programme will outline measures for the decommissioning of the Project. The Decommissioning Programme would be submitted	Scoping Amended at EIA Report.	Required under Sections 105 (Energy Act 2004) and Marine Licence consent conditions.	Relevant to commercial fisheries as decommissioning planning ensures eventual removal of infrastructure and return of areas to potential future fishing use.

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to commercial fisheries assessment
	prior to construction commencing to MD-LOT and approved by Scottish Ministers prior to construction.			
M-120	A **Volume 4, Outline Construction Method Statement** (CMS) has been submitted with this Application. The Final CMS will be completed prior to construction commencing and submitted to MD-LOT for approval. The Final CMS will include: a) details of the commence dates, duration and phasing of key elements of construction, working areas, the construction procedures and good working practices; b) details of the roles and responsibilities; and c) details of how the construction related mitigation step proposed are to be delivered.	EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as clear planning and phasing of works allows fishers to plan activity and avoid conflict during construction.
M-122	Development of and adherence to an Offshore Operations and Maintenance Plan, which will confirm the Project's operations and maintenance activities. This will be submitted to MD-LOT for approval post-consent.	EIA Report.	s.36 conditions and marine licences conditions.	Relevant to commercial fisheries as it sets out how operational activities will be managed to reduce interference with fishing activity.

14.8 Methodology for Environmental Impact Assessment Report

14.8.1 Introduction

14.8.1.1 The project-wide approach to assessment is set out in **Chapter 5: Approach to EIA.** Whilst this has informed the approach that has been used in this commercial fisheries assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of the commercial fisheries assessment.

14.8.2 Significance evaluation methodology

Overview

14.8.2.1 The significance level attributed to each effect has been assessed based on the value of the affected receptor and the magnitude of change resulting from the Project. The level of significance has then been determined by the combination of sensitivity and magnitude.

14.8.2.2 In addition to the general approach and guidance outlined in **Chapter 5: Approach to the EIA**, the commercial fisheries assessment also considers the guidance documents presented in **Section 14.2.2**.

14.8.2.3 The process for determining the significance of effects is a two-stage process that involves defining the magnitude of the potential impacts and the sensitivity of the receptors. This Section describes the criteria applied in this Chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors.

Sensitivity of receptor

14.8.2.4 The sensitivity criteria for commercial fisheries receptors are provided in **Table 14.9**.

Table 14.9 Receptor sensitivity criteria for commercial fisheries

Sensitivity value	Description	Example Indicators
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.
Low	Receptor is not generally vulnerable to impacts that may arise from the project and / or has high recoverability. 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.	• area represents a small portion of fleet activity; • similar grounds are accessible within normal operational range; and • flexible gear use or target species.

Sensitivity value	Description	Example Indicators
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 income; • some difficulty relocating effort without displacement or loss; and • limited spatial mobility or operational constraints (for example, gear type, vessel size).
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; and • long-term or permanent loss anticipated.

14.8.2.5 Vulnerability and recoverability are key considerations in determining receptor sensitivity. Vulnerability reflects the likelihood that a receptor will experience an adverse effect from a change in baseline conditions, while recoverability represents the receptor's ability to return to baseline following disturbance. Together, these factors inform the overall sensitivity rating by indicating how exposed and adaptable the receptor is to potential impacts from the Project.

14.8.2.6 Vulnerability is the susceptibility of a receptor to experience the impact of a change in baseline conditions, for example:

- 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.

14.8.2.7 Recoverability is a measure of how well a receptor recovers following exposure to an effect, for example:

- very low recoverability relates to a very high sensitivity: receptor does not have the ability to recover, or recovery is long-term (for example, ≥12 years); and
- very high recoverability relates to a negligible sensitivity: receptor is highly likely to recover fully to levels not detectable against baseline.

Magnitude of changes

14.8.2.8 The magnitude criteria for commercial fisheries are provided in **Table 14.10** and are based upon the technical expert's experience and judgement. In determining magnitude, each assessment considered the spatial extent, duration, frequency, and reversibility of impact and these are outlined within the magnitude section of each assessment of impact (for example, a duration of hours or days would be considered for most receptors to be of short-term duration, which is likely to result in a low magnitude of impact).

Table 14.10 Impact magnitude criteria for commercial fisheries

Magnitude Value	Description	Example indicators
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 (for example, slight loss of resource within the Project); and • slight loss of ability to carry on fishing activities (for example, slight loss of fishing effort within the Project). And / or: Impact is of very short-term duration (for example, 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; • evidence from industry consultation confirms negligible operational reliance; and • any effect is short-lived and easily absorbed.
Low	Impact is expected to result in one or more of the following: • minor loss of target fish or shellfish biological resource (for example, minor loss of resource within the Project); and • minor loss of ability to carry on fishing activities (for example, minor loss of geographic extent due to the Project). And / or: Impact is of short-term duration (for example, 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; and • displacement or resource loss can be offset within normal operating range.
Medium	Impact is expected to result in one or more of the following: • partial loss of target fish or shellfish biological resource (for example, moderate loss of resource within the Project); and • partial loss of ability to carry on fishing activities (for example, moderate loss of geographic extent due to the Project). And / or: Impact is of medium-term duration (for example, less than 12 years) and / or is of moderate physical extent.	• grounds contribute materially to seasonal or annual income; • evidence of displacement pressures (for example, competition, increased pressure on grounds, gear conflict); and • consultation indicates moderate reliance or operational challenge in adapting.
High	Impact is expected to result in one or more of the following: • substantial loss of target fish or shellfish biological resource (for example, loss of substantial proportion of resource within the Project); and	• affected area represents core or critical fishing ground; • high dependence confirmed through data and consultation; • long-term or permanent reduction in activity anticipated; and

Magnitude Value	Description	Example indicators
	• substantial loss of ability to carry on fishing activities (for example, substantial loss of geographic extent due to the Project). And / or: Impact is of long-term duration (for example, ≥12 years duration) and / or is of extended physical extent.	• no viable alternative grounds within operational range.

14.8.2.9 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 EU EIA Directive (2011/92/EU) and related regulations focus more on assessing the significance of effects rather than rigidly defining timeframes, but they emphasize the need for a comprehensive analysis of effects over different temporal scales. Similarly, the International Energy Agency recommend considering the temporal relevance of impacts in relation to a project's lifecycle.

14.8.2.10 In relation to commercial fisheries, the duration of impact forms an important component of the magnitude of change, as it influences the overall scale and longevity of effects. For the purposes of this assessment, the following indicative timeframes are applied:

14.8.2.11 Short-term:

- these are typically impacts that last for a relatively brief period, often in the range of one to two years;
- short-term impacts generally refer to temporary changes that are expected to reverse quickly once the disturbance has ceased; and
- this timeframe is consistent with the natural recovery cycles of many environmental systems.

14.8.2.12 Medium-term:

- medium-term impacts are often those expected to last several years but not beyond ten 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.

14.8.2.13 Long-term:

- long-term impacts typically extend from 12 years onwards or could be permanent or only partially reversible within the human timescale; and
- long-term impacts could involve major habitat changes, loss of biodiversity, irreversible degradation of fisheries resources, or sustained, continuous impacts, such as prolonged loss of access to fishing grounds.

Significant evaluation

14.8.2.14 By assigning and combining magnitude and sensitivity criteria, overall effect significance upon commercial fisheries receptors can be determined (**Table 14.11**).

Table 14.11 Matrix used for the assessment of significance of the effect

	Magnitude of change			
Value / sensitivity	**High**	**Medium**	**Low**	**Very Low**
High	**Major (Significant).**	**Major (Significant).**	**Moderate (Significant).**	**Minor (Not Significant).**
Medium	**Major (Significant).**	**Moderate (Significant).**	**Minor (Not Significant).**	**Minor (Not Significant).**
Low	**Moderate (Significant).**	**Minor (Not Significant).**	**Minor (Not Significant).**	**Negligible (Not Significant).**
Very low	**Minor (Not Significant).**	**Minor (Not Significant).**	**Negligible (Not Significant).**	**Negligible (Not Significant).**

14.8.2.15 During the assessment of effects for each identified receptor, the value in **Table 14.9** will be combined with the magnitude of change from **Table 14.10** to produce an overall significance rating based on the evaluation matrix shown in **Table 14.11**. As a general rule, **Major** and **Moderate** effects are considered to be **Significant** and **Minor** and **Negligible** effects are considered to be **Not Significant**.

14.9 Assessment of effects: Construction stage

14.9.1 Introduction

14.9.1.1 This Section provides an assessment of the effects for commercial fisheries from the construction of the offshore elements of the Project.

14.9.1.2 The assessment methodology set out in **Section 14.8** has been applied to assess effects to commercial fisheries from the Project.

14.9.2 Impact C1: Reduction in access to, or exclusion from established fishing grounds within the OAA

Overview

14.9.2.1 The maximum design scenario relating to the reduction in access or exclusion within the OAA is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.9.2.2 Construction within the OAA is expected to be delivered in phases, with a total construction period of 12 years. The detailed phasing strategy, including the sequence, timing, and spatial delineation of individual phases, has not yet been confirmed.

Sensitivity or value of receptor

14.9.2.3 The UK demersal otter trawl, demersal seine, dredge, potting and hook and line fishing fleets specifically target the local study area from the local ports of Peterhead and Fraserburgh (notably 99% of the landed value from ICES rectangle 45E9 is landed into these ports). While these fishing fleets have access to alternative fishing grounds outside the local study area, they are expected to have a higher dependence on local grounds due to fuel cost, operating distances and weather constraints. The demersal otter trawl, demersal seine, dredge, potting and hook and line fishing fleets are considered to have moderate levels of alternative fishing grounds based on mapping and landing statistics within the regional study area. Given the nature of the impact of loss of access due to WTG floating units within the OAA, these fishing fleets are deemed to be of high vulnerability to this impact and with low recoverability due to the restricted access throughout the lifetime of the Project.

14.9.2.4 The sensitivity of the UK demersal otter trawl and UK demersal seine fleets are deemed to be **medium** based on its evident targeting of grounds that overlap particular portions of the OAA. Fisheries Liaison Officer knowledge on the operational practices of fleets targeting this area indicates that the demersal otter trawl and demersal seine vessels that have operated within the OAA also regularly fish other grounds within ICES rectangle 45E9 and further east, in other areas of the Fladen Ground Nephrops Functional Unit, as well as within the Moray Firth. These vessels are not restricted to fishing within one Functional Unit or another, and the Total Allowable Catch (TAC) for Nephrops is set at a North Sea level. Consequently, they have moderate availability of alternative grounds that are fished routinely, and therefore overall sensitivity is considered **medium.**

14.9.2.5 The sensitivity of the UK dredge and beam trawl fleets is deemed to be **low**, reflecting their lack of reliance on the OAA and focus on established target grounds located elsewhere within the region.

14.9.2.6 The sensitivity of the potting and hook and line fleets is considered to be **medium**, as recent indications suggest some vessels are extending activity further offshore, including exploratory fishing. These gears may also find areas of lower trawl and other mobile gear activity attractive, providing opportunities for exploratory or opportunistic fishing within or around the OAA.

14.9.2.7 UK and non-UK pelagic mobile fleets actively target a wide range of grounds on a seasonal basis, and data do not indicate that their activity is routine or frequent within the Project area. All pelagic gear fleets are considered to have an extensive operational range and are highly adaptive and resilient to change. Given that these fleets operate in response to the movements of highly mobile pelagic fish species, any variation in migration patterns or distribution necessitates continual adjustment of fishing locations and timing. Pelagic trawl operations also require substantial sea room to shoot and tow nets and to position gear precisely in the water column to intercept and capture fish ahead of an approaching shoal. The operational flexibility and wide spatial range of these fleets, combined with their inherent capacity to adapt to environmental and biological variability, supports the assessment that the sensitivity of these receptors is **medium**.

Magnitude of impact

14.9.2.8 Construction of the OAA is anticipated to extend over a period of up to 12 years and will encompass the entire area within the OAA boundary of approximately 684km². Throughout this period, commercial fishing activity will be excluded from locations where construction is taking place, supported by the implementation of 500m safety zones around active works, 50m safety zones around partially complete structures, and rolling advisory distances of up to 500m around mobile installation vessels. It is intended that the OAA is built out in stages

and as such it is intended that fishing activity will be able to continue in areas not under construction during the phased build out. However, the sequence of phases or areas to be phased is not yet known. Therefore, for the purposes of assessing impact it is assumed that construction activities will not resume within areas of the OAA for the duration of the construction stage.

14.9.2.9 The assumption regarding exclusion from fishing grounds during construction is central to the commercial fisheries impact assessment. The resulting loss of access to established fishing grounds would displace commercial fishing activity from within areas of the OAA, removing access to the fish and shellfish resources located there. This impact would affect fleets operating at both national and international scales and is expected to be continuous during the 12-year period of construction.

14.9.2.10 **UK demersal otter trawl**: consultation with the commercial fishing industry has highlighted the importance of the OAA to demersal otter trawl fisheries, specifically for two target fisheries:

- demersal otter trawl vessels typically operating pair trawls (i.e., between two vessels) targeting haddock, monkfish and mixed demersal species; and
- demersal otter trawl vessels typically operating twin-rig trawl gear (i.e., one vessel, with the net separated by a clump weight into two cod-ends) targeting Nephrops.

14.9.2.11 The local study area encompasses four ICES rectangles and the OAA is entirely located within ICES rectangle 45E9. The areal overlap of the OAA (684km^2) with ICES rectangle 45E9 (3,360km^2) is approximately 20.4%. Landing statistics indicate a recent annual average value landed from ICES rectangle 45E9 of £8.3 million based on a five-year average from 2019-2023 by all gear types, with an equivalent value of £4.8 million (57%) by demersal otter trawlers. Nephrops, haddock, monkfish, whiting, cod and halibut are caught by demersal otter trawlers in this ICES rectangle.

14.9.2.12 VMS data from the MMO shows demersal otter trawl activity (including single, twin and pair trawling) within ICES rectangle 45E9 occurring primarily within the centre of the OAA and along and within the eastern boundary of the OAA; see **Volume 3, Appendix 14.1**. This is corroborated by surface swept area data collated by ICES for demersal otter trawl vessels, and by long-term analysis of AIS data, in addition to feedback gathered during fishing industry consultation, as reported in **Volume 3, Appendix 14.1**. While the OAA lies within an area of relatively lower overall fishing effort compared to adjacent and wider areas of the region, sustained demersal otter trawl activity is evident along the eastern edge of the OAA, particularly towards its south-eastern boundary. The site therefore largely avoids the most intensively fished grounds but does overlap with areas that experience routine, though moderate, levels of fishing activity. Spatial fishing activity patterns also align with mapping of suitable Nephrops habitat within ICES rectangle 45E9 (Scottish Government, 2022).

14.9.2.13 Analysis of AIS data indicates that patterns of activity for individual vessels show no evidence of specific or disproportionate reliance on the eastern edge of the OAA. Rather, vessels operating in this area collectively utilise a wider network of grounds across ICES rectangle 45E9 and adjacent parts of the Fladen Ground Nephrops Functional Unit, reflecting typical patterns of spatial flexibility within the demersal otter trawl fleet. As such, no single vessel or group of vessels exhibits higher dependency on the OAA relative to surrounding grounds, which lie on the marginal fringes of the key Nephrops habitats defined by sediment type and depth. Furthermore, scientific advice (ICES, 2024) indicates that the biological status of Nephrops within this Functional Unit is above the abundance expected to support Maximum Sustainable Yield (MSY), suggesting that the OAA does not represent a uniquely important area within the broader distribution of the stock.

14.9.2.14 Further evidence of fishing activity throughout the OAA has been provided by the commercial fishing industry, in the form of fishing vessel plotter data. This data is considered

important evidence to inform the impact assessment, however, is confidential in nature given that it is pertaining to individual vessels.

14.9.2.15 Plotter data provided by the fishing industry indicates distinct patterns of demersal trawl activity across the OAA. In the northern part of the OAA, there is a high concentration of demersal twin-rig trawling for Nephrops along the outer edges. Moving southwards, pair trawl tracks targeting haddock and monkfish are present within the OAA, with Nephrops twin-rig activity beginning to intersect along the eastern boundary. The central area of the OAA, extending towards the offshore export cable corridor to the west, shows continued pair trawl activity alongside an increased presence of Nephrops twin-rig trawling. In the southern portion of the OAA, pair trawling is concentrated through the central area, with Nephrops twin-rig activity along the eastern side. In the western section of the OAA, Nephrops twin-rig trawling is the dominant method observed. These data confirm that the OAA overlaps with actively fished grounds targeted by high-value demersal trawl fisheries, which is a key consideration for assessing potential construction stage impacts on commercial fisheries.

14.9.2.16 Based on the assumption that fishing will not resume within the OAA during the entirety of the construction stage, the UK demersal otter trawl fleet would be directly impacted with the loss of the ability to fish across establish grounds that overlap the OAA. Overall, the impact during construction is assessed as occurring over a 12-year period, to directly affect the fishery which has a high value in the local study area and a moderate value within the OAA and which is specifically targeted across grounds that overlap the OAA as evidenced by landing statistics and spatial data. However, it is acknowledged that, based on analysis of VMS data, the OAA does not represent one of the highest-value or most intensively fished locations for Nephrops or whitefish in the region, with substantially higher fishing effort and value recorded across adjacent grounds within ICES rectangle 45E9 and more widely across the Fladen Ground. The OAA therefore represents a locally used but comparatively lower-value part of the wider fishing area. Taking this into account, while the OAA supports regular fishing activity, its relative contribution to overall fleet value and effort distribution is moderate, and the magnitude of effect is therefore considered to remain **medium**.

14.9.2.17 **UK demersal seine**: landing statistics indicate a recent annual average value landed from ICES rectangle 45E9 by demersal seine gear of £42,000 (based on 2019-2023 landings and noting that data pre-2016 was not reported separately for demersal seine). Key target species are whiting and haddock. Spatial activity mapping indicates fishing intensity by demersal seines in the local and regional study areas is focused inshore of the OAA and to the south. The available VMS evidence, including MMO data by value and ICES data by swept area ratio, indicates that limited demersal seining occurs within the OAA.

14.9.2.18 Industry consultation highlights that recent developments in new facilities specifically for processing smaller size class of haddock may lead to an increase of fishing intensity in the region by this fleet sector. The processing facilities include automated filleting of smaller fish (above minimum conservation reference size) and onward sale into value-added products. It is therefore feasible that this fishery could return in the near future and be targeted in those areas that are currently fished using demersal seines.

14.9.2.19 Plotter data show comparatively lower levels of demersal seine activity across the OAA relative to demersal trawl. In the northern part of the OAA, demersal seine activity is present within the OAA footprint. Moving southwards, demersal seine tracks intersect with areas of pair trawl activity within the OAA. In the central area of the OAA, extending towards the offshore export cable corridor to the west, demersal seine activity continues to be observed, though at lower intensity than adjacent trawl activity.

14.9.2.20 Due to the presence of a buoyed construction area it is assumed that fishing will not resume within the OAA during the entirety of the construction stage. The UK demersal seine fleet would be directly impacted with the loss of the ability to fish across the OAA, though it is

noted that the fleet does not target key grounds here. Overall, the impact during construction is assessed as occurring over a 12-year period, to directly affect the fishery which has a low value within the OAA as evidenced by landing statistics; therefore, the magnitude is considered to be **low**.

14.9.2.21 **UK pelagic otter trawl and purse seine**: landing statistics indicate a recent annual average value landed from ICES rectangle 45E9 of £3.5 million in herring and mackerel targeted fisheries.

14.9.2.22 VMS data from the MMO show pelagic trawl activity within ICES rectangle 45E9 occurring primarily along the eastern boundary of the OAA and to the east of the OAA, with only limited activity recorded inside the OAA (see **Volume 3, Appendix 14.1**). VMS data for SPFA member vessels from 2013-2021 indicate some fishing activity along the eastern edge of the OAA boundary and within the central area, but with no evidence of regularly occurring fishing within the OAA itself. Most pelagic trawl activity is concentrated immediately east of the OAA, although vessel transit tracks show routes passing through the OAA to access fishing grounds further east. This suggests that construction stage infrastructure could affect the direction or alignment of pelagic trawl gear deployment when vessels are operating to the east of the OAA.

14.9.2.23 On the basis that fishing will not resume within the OAA during the construction stage, the UK pelagic trawl fleet would be directly affected by the loss of access to this area. While the fishery has a medium value within the wider local study area, activity levels within the OAA are low, as evidenced by VMS and AIS data and fishing industry plotter data (**Volume 3, Appendix 14.1**). The impact during construction is therefore assessed as occurring over a 12-year period, with a **low** magnitude.

14.9.2.24 **Non-UK pelagic otter trawl and purse seine**: VMS data from Norwegian vessels show no evidence of pelagic trawl activity within the OAA (see **Volume 3, Appendix 14.1**). Landing statistics for EU vessels indicate small volumes of herring taken from ICES rectangle 45E9 by Denmark, the Netherlands, Germany, France, Lithuania and Sweden (see **Volume 3, Appendix 14.1**). Denmark reported the highest level of catch, with an annual average of approximately 2,200 tonnes of herring from ICES rectangle 45E9 between 2012 and 2016. Based on the assumption that fishing will not resume within the OAA during the construction stage, non-UK pelagic trawl fleets would be directly affected by the loss of access to this area. As the OAA is located outside the 12nm limit within the UK EEZ, these fleets currently have access rights and hold quota for herring in the North Sea. Given the low to medium value of this fishery within the OAA, as evidenced by landing statistics and VMS data, the impact during construction is assessed as occurring over a 12-year period and of **low** magnitude.

14.9.2.25 **UK scallop dredge:** landing statistics show no recorded landings by the UK dredge fleet from ICES rectangle 45E9 over the period 2012-2023. Other ICES rectangles within the regional study area are of greater importance to this fishery, with a recent annual average value of approximately £1.9 million recorded between 2010 and 2023. This is supported by VMS data, which show no evidence of dredge activity overlapping the OAA.

14.9.2.26 Based on the assumption that fishing will not resume within the OAA during the construction stage, the UK dredge fleet would be directly affected by the loss of access to the OAA, although there is no evidence of scallop grounds within this area. Given the negligible value of this fishery within the OAA, as evidenced by landing statistics, VMS data and fishing industry plotter data (**Volume 3, Appendix 14.1**), the impact during construction is assessed as occurring over a 12-year period and of **very low** magnitude.

14.9.2.27 **UK beam trawl:** landing statistics show no recorded landings by the UK beam trawl fleet from ICES rectangle 45E9 over the period 2012-2023. Other ICES rectangles within the regional study area show only very limited activity by this fleet, with a recent annual average

value of approximately £5,000 recorded between 2019 and 2023. This is supported by VMS data, which show no evidence of beam trawl activity overlapping the OAA.

14.9.2.28 Based on the assumption that fishing will not resume within the OAA during the construction stage, the UK beam trawl fleet would be directly affected by the loss of access to the OAA, although there is no evidence of routinely targeted beam trawl grounds within this area. Given the negligible value of this fishery within the OAA, as evidenced by landing statistics, VMS data and fishing industry plotter data (**Volume 3, Appendix 14.1**), the impact during construction is assessed as occurring over a 12-year period and of **very low** magnitude.

14.9.2.29 **UK potting:** landing statistics indicate that UK vessels deploying pots have targeted brown crab in ICES rectangle 45E9 sporadically across 2012-2023, with landings recorded recently in 2019, 2021 and 2023. The recent annual average landings value from 45E9 was £8,000 (based on 2019-2023 landings) and this peaked in 2021 at £33,000. This recent peak in activity is understood to possibly be associated with the increasing presence of larger 'vivier' crabbers (i.e., large vessels equipped with tanks for storing live catch) exploiting new grounds off the east coast of Scotland. The wider regional study area is more important to the potting fleet, with recent annual average of £3.4 million from the regional study area (based on 2019-2023).

14.9.2.30 It is noted that VMS data is not representative of the potting fleet, given that VMS data is only published for vessels 15m and over. Landing statistics are considered with high confidence given that they include all vessel lengths and declaration of sales are required through the RBS Legislation. Overall, the impact during construction is assessed as occurring over a 12-year period, to directly affect the fishery which has a low value within the OAA as evidenced by landing statistics; therefore, the magnitude is considered to be **low**.

14.9.2.31 **UK gear with line and hooks:** landing statistics indicate negligible landings by vessels deploying gear with hooks (including handline and longline) within ICES rectangle 45E9. Overall, the impact during construction is assessed as occurring over a 12-year period, to directly affect the fishery which has a negligible value within the OAA as evidenced by landing statistics; therefore, the magnitude is considered to be **very low**.

Significance of residual effect

14.9.2.32 The Project commitments (as shown in **Table 14.8**) include the implementation of Safety Zones during construction, O&M and decommissioning (M-031), advance notification of activities through Notices to Mariners and Kingfisher Bulletins (M-030), and the development of a Vessel Management and Navigational Safety Plan (M-039) to manage vessel movements and interactions. These measures, alongside ongoing engagement through the FMMCP (M-048), will help reduce the risk of spatial conflict and minimise disruption to commercial fisheries arising from temporary loss of access to fishing grounds.

14.9.2.33 UK demersal otter trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.2.34 UK demersal seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.2.35 UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low.** The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.2.36 Non-UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.2.37 UK scallop dredge: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **very low**. The effect is of **Negligible** (**Not Significant**) in EIA terms.

14.9.2.38 UK beam trawl: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **very low**. The effect is of **Negligible** (**Not Significant**) in EIA terms.

14.9.2.39 UK potting: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.2.40 UK gear with hooks: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **very low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

Additional mitigation and residual significance

14.9.2.41 The Applicant is proposing a package of commitments and mitigation that will be delivered through the FMMCP including both embedded commitments and additional mitigation where significant adverse effects have been identified.

14.9.2.42 Additional mitigation measures have been developed to address the reduction in access to, or exclusion from established fishing grounds within the OAA. They collectively aim to reduce or offset predicted adverse effects and promote opportunities for coexistence.

14.9.2.43 **Table 14.12** defines these additional measures and explains their specific role in addressing the impact.

Table 14.12 Additional mitigation measures for commercial fisheries in relation to the OAA

ID	Environmental measure proposed	Relevance to commercial fisheries assessment
M-219	Fisheries Fund: A Fisheries Fund shall be established for the array area (within the OAA) once determined, operating during the construction stage and extending through the first five years of operation. The Fund shall be directed towards fisheries where moderate adverse effects are identified within the EIA Report. The Fisheries Fund shall not provide direct compensation to individual businesses. Instead, it shall support the fishing sector more broadly by funding research and initiatives that promote co-existence, adaptation, and resilience. Priority areas of support shall include: • Research and enhancement of target fish and shellfish stocks to strengthen ecological resilience and sustainability for example, Nephrops, monkfish and haddock. • Co-designed initiatives such as gear innovation, diversification, operational adaptation, and business resilience. • Collaborative, evidence-based investment to improve the long-term viability of fisheries. Commitment is made to consult with the fishing industry and the scientific community to define administrative arrangements, identify research priorities, and ensure transparent governance.	The Fisheries Fund directly addresses moderate adverse effects identified in the EIA for the OAA, particularly those arising from reduced access to grounds, and operational adaptation needs. While not providing direct compensation to individual businesses, the Fund supports the sector-wide resilience and long-term sustainability of commercial fisheries, including key fleets identified in the assessment (for example, demersal otter trawl). By enabling research, stock enhancement, and collaborative initiatives, the measure mitigates residual impacts at the fleet and industry level, thereby contributing to the overall package of proportionate mitigation for commercial fisheries receptors.
M-220	Access Corridor along the Golden Eagle to Claymore Oil Export pipeline: No above-seabed infrastructure, including WTG floating units, moorings, anchors, or dynamic cables, shall be located across the existing pipeline situated in the centre of the OAA, nor within a 500 m buffer either side of the pipeline. This commitment establishes an Access Corridor equating to approximately 29km², representing 4% of the OAA. Array cables and pipeline crossings may occur within this Access Corridor; however, no other permanent above-seabed infrastructure shall be installed. The	The Access Corridor maintains a designated area free from above-seabed infrastructure, thereby preserving opportunities for fishing and facilitating safe passage for transiting fishing vessels.

ID	Environmental measure proposed	Relevance to commercial fisheries assessment
	purpose of the Access Corridor is to provide opportunity for demersal trawl fishing activity and to maintain passage for transiting fishing vessels.	
M-221	Exploration of coexistence within the OAA: An assessment shall be undertaken to investigate opportunities for coexistence with fishing activity within the OAA. The assessment shall consider indicative infrastructure layouts and will provide an evaluation of the practicality of different fishing methods and give consideration to feasible gear adaptations. The SFF shall be consulted during the Development, Specification and Layout Plan (DSLP) process, which shall set out the detailed design and layout of the offshore development. As part of this process, the Applicant will seek input from the SFF to inform consideration of whether areas compatible with floating wind infrastructure could potentially support fishing activity, taking account of gear types, spatial patterns, and operational constraints.	This measure provides a pathway to reduce long-term impacts by actively exploring the feasibility of fishing alongside floating wind infrastructure. By considering gear trials, layout optimisation, and consultation through the DSLP process it provides the potential for adaptive coexistence solutions.
M-222	Fisheries monitoring and related updates to FMMCP: A fisheries monitoring programme shall be implemented to understand variations in commercial fisheries activity in response to construction of the project and to inform updates to the FMMCP. The programme shall comprise the collation and analysis of commercial fisheries landings and activity data (including landings statistics, VMS datasets, and other available sources), together with consultation with the fishing industry. Monitoring shall extend across pre-construction, construction, and post-construction stages, with annual reporting. The programme shall assess trends in fishing activity, landings by port and species, and fishing vessel presence, and shall review guard vessel and Marine Coordination Centre records where available. Monitoring outputs shall be used to validate assessment assumptions, identify emerging issues, and inform any necessary updates to the FMMCP. Where monitoring demonstrates the need for additional action, further mitigation shall be developed and implemented in consultation with regulators and stakeholders.	The monitoring programme ensures that the assumptions underpinning the EIA assessment are validated and that operational fisheries responses are tracked over time. By analysing landings, effort, and vessel presence data, alongside industry consultation, this measure enables adaptive management of fisheries impacts, ensuring that unforeseen or greater-than-predicted effects can be addressed through additional mitigation. It provides a critical evidence base for understanding residual effects and underpins the commitment to an iterative and responsive FMMCP.

14.9.2.44 Based on the additional commitments provided in **Table 14.12** and secured through the FMMCP, the residual effect of this impact during construction remains **Minor Adverse** to **Negligible** (**Not Significant**) for all receptors, except demersal otter trawl.

14.9.2.45 **Demersal otter trawl:** While the additional mitigation measures outlined above (M-219 to M-222) provide a comprehensive framework to address and monitor the effects on commercial fisheries, the residual significance for the demersal otter trawl fleet is not reduced to a minor category. This reflects the nature of the impact, specifically, the loss of access to established fishing grounds within areas of the OAA over a 12-year period, and recognition that individual vessels may experience more pronounced effects than others, depending on historic patterns of use and operational dependency. Although the Fisheries Fund (M-219) represents an important measure supporting sector-level adaptation and resilience, it does not provide direct business-level financial mitigation for the total duration of the construction period.

14.9.2.46 The Project is not in a position to pursue alternative mitigation measures, such as the establishment of obstacle-free zones within the OAA. Due to the spatial and technical constraints, the full extent of the OAA is required to accommodate the infrastructure. Furthermore, while the establishment of an Access Corridor (M-220) maintains some open water space along the Golden Eagle to Claymore export pipeline, it remains uncertain whether this will support the practical resumption of demersal otter trawl fishing activity given potential operational constraints of fishing gear. Overall, the residual significance of effect on the demersal otter trawl fleet is assessed to remain **Moderate Adverse (Significant)** during the construction phase.

14.9.3 Impact C2: Reduction in access to, or exclusion from, established fishing grounds within the offshore export cable corridor

Overview

14.9.3.1 The maximum design scenario relating to the reduction in access or exclusion within the offshore export cable corridor is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

Sensitivity or value of receptor

14.9.3.2 Potting vessels are sensitive to spatial impacts because creels and pots are deployed on the seabed for extended periods and would need to be physically relocated to avoid construction activities. In addition, potting vessels are typically smaller in size and routinely operate as day boats with a limited operational range. Their reduced ability to access more distant alternative fishing grounds means that this fleet is sensitive to continued or prolonged loss of access within the corridor.

14.9.3.3 The potting fleet has more of a limited operational range and the static nature of gear deployment reduce the adaptability when access limitations occur. As noted in Section 7 of **Volume 3, Appendix 14.1**, the availability of alternative grounds is moderate, and the sensitivity of potting vessels is therefore assessed as medium, reflecting both susceptibility to displacement and constrained adaptive capacity.

14.9.3.4 For bottom contact mobile gears, including demersal otter trawl, demersal seine, scallop dredge, and beam trawl, the level of cable protection that may be required within the

offshore export cable corridor presents a potential constraint to fishing activity. These mobile gear types are considered more sensitive to loss of access due to their reliance on uninterrupted seabed contact and the potential obstacle to fishing associated with exposed or externally protected cables.

14.9.3.5 The demersal otter trawl, demersal seine, and dredge fleets are assessed to have moderate availability of alternative fishing grounds, often requiring some degree of displacement or operational adjustment. Their vulnerability is considered **medium**, reflecting a degree of economic reliance on specific fishing grounds within the offshore export cable corridor, though not to the extent that access loss would result in major disruption to fleet viability. Recoverability is also assessed as **medium**, recognising that while these fleets can adapt to some extent (for example, through gear flexibility, spatial mobility, or targeting alternative species), such adaptation may not be immediate and could carry economic or operational costs.

14.9.3.6 In line with the sensitivity key indicators, these fleets are not considered highly specialised or solely dependent on the offshore export cable corridor area, nor are they entirely resilient to spatial disruption. Overall, these mobile fleets are considered to have moderate levels of alternative fishing grounds, as indicated in Section 7 of **Volume 3, Appendix 14.1**. The sensitivity of these receptors is therefore, considered to be **medium**, reflecting a balanced level of susceptibility and adaptive capacity in the context of potential cable-related impacts.

14.9.3.7 The pelagic mobile fleets actively target a wide range of grounds on a seasonal basis and their activity is not focused across the offshore export cable corridor. All pelagic gear fleets are considered to have an extensive operational range, be highly adaptive and resilient to change. The sensitivity of these receptors is therefore, considered to be **low**.

14.9.3.8 The hook and line jigging fishery is highly seasonal and targets a highly mobile species. Gear is likely to be operational across areas of cable protection and the opportunity to catch mackerel is not likely to be impeded by construction activities within the offshore export cable corridor. The sensitivity of this receptor is therefore, considered to be **low**.

Magnitude of impact

14.9.3.9 The offshore export cable corridor overlaps with ICES rectangles 44E8 and 45E9, with small sections of overlap with ICES rectangles 44E9 and 45E8. The offshore export cable corridor is fished by several commercial fishing fleets, as discussed below.

14.9.3.10 **UK demersal otter trawl:** VMS data shows consistently highly-targeted Nephrops grounds in the southwest corner of ICES rectangle 45E9, where the offshore export cable corridor approaches the OAA. FiSMaDiM and fishing intensity mapping corroborates this (see **Volume 3, Appendix 14.1**). Landing statistics further support this indicating high annual value from both ICES rectangle 44E8 (£2.1 million) and 45E9 (£4.7 million).

14.9.3.11 As described in the maximum design scenario (**Table 14.7**), up to 20% of the offshore export cable corridor will require cable protection and an area of up to 16.8 km^2 will undergo temporary disturbance during construction. Based on the presence of demersal trawl activity along portions of the offshore export cable corridor and the requirement to avoid areas of construction in the short to medium term, the magnitude of impact for the demersal otter trawl fishery is assessed as **medium**.

14.9.3.12 **UK demersal seine:** VMS data show moderate levels of demersal seine activity within the northeast corner of ICES rectangle 44E8, where it overlaps with the offshore export cable corridor. Recent landing statistics indicate an average annual value of approximately £300,000 from ICES rectangle 44E8, including from grounds that intersect with the offshore export cable corridor. More routinely targeted grounds for this fishery are located to the northwest and south of the Project area. Based on the presence of demersal seine activity

along portions of the offshore export cable corridor and the requirement to avoid areas of construction in the short to medium term, the magnitude of impact for the demersal seine fishery is assessed as **medium**.

14.9.3.13 **UK and non-UK pelagic otter trawl and purse seine**: VMS data from the MMO show no evidence of recent pelagic otter trawl activity within the offshore export cable corridor. However, VMS data provided by the SPFA indicate the potential for sporadic and occasional pelagic trawl activity in discrete parts of the corridor (see **Volume 3, Appendix 14.1**). This is broadly supported by landings data, which show that pelagic trawler landings from ICES rectangle 44E8 have been sporadic over time, although a notable peak occurred in 2023 when approximately £5.6 million of herring and mackerel were landed. The precise locations of these catches are unknown, as they do not fall within the temporal resolution of available VMS data, and landings from preceding years (dating back to 2012) have been consistently low.

14.9.3.14 Spatial and landings data indicate that higher levels of pelagic fishing activity occur within the regional study area to the north and south of the offshore export cable corridor, rather than within the corridor itself. As herring are a highly mobile species, opportunities to target them are unlikely to be constrained by construction activities within the offshore export cable corridor, and fishing vessels are expected to be able to avoid construction areas with prior notification. While sporadic high-value landings have been recorded from ICES rectangles overlapping the corridor, the low frequency of this activity and higher dependence on grounds north and south of the offshore export cable corridor mean that the magnitude of impact is assessed as **low** for both UK and non-UK pelagic fisheries.

14.9.3.15 **UK scallop dredge:** VMS data shows consistently targeted dredge grounds overlapping the offshore export cable corridor in ICES rectangle 44E8 (see **Volume 3, Appendix 14.1**). Grounds are targeted intensely from the 3nm limit seawards to the 12nm limit. The NERIFG mapping corroborates this. On average, £800,000 value is landed by the UK dredge fleet from ICES rectangle 44E8 annually (based on long-term average of 2012-2023; with an average of £654,000 across 2019-2023).

14.9.3.16 Spatial data show that the offshore export cable corridor intersects an area of concentrated scallop dredge activity located offshore of the northeast coast of Scotland. This high-intensity fishing ground extends in a continuous band running north to south, broadly parallel to the coastline, out to and beyond the 12nm territorial limit. The cable corridor crosses this ground perpendicularly, effectively running through the established dredge ground along its route to landfall and creating a potential interruption to continuous dredging activity between the northern and southern sections of the fishery.

14.9.3.17 Offshore export cable corridor construction activities could potentially impact duration or length of fishing vessel dredge tows and scallop dredgers will not be able to access areas of the offshore export cable corridor that are under construction, across the cables themselves, and areas where cable protection prohibits practicable deployment of dredge gear. Scallop dredge gear penetrates the sediment by up to 20 centimetres (cm) to 30cm and therefore areas of cable protection, as well as the cables themselves, are likely to be avoided by scallop dredge vessels. As described in the maximum design scenario (**Table** 14.7), up to 20% of the offshore export cable corridor will require cable protection and an area of up to 16.8km^2 will undergo temporary disturbance during construction. In addition, it is noted that Marine Guidance Notice (MGN) 661 (Maritime and Coastguard Agency (MCA), 2021) advises that mobile fishing vessels with penetrative gear avoid submarine cables, and while cables are typically buried or protected to allow trawling, the active penetration of dredge gear into the sediment makes MGN 661 more pertinent to this gear type, especially in areas where target burial depth is not achieved. Based on the value and extent of overlap within ICES rectangle 44E8, the requirement to avoid areas of construction and the expectation that scallop dredging will not resume across cables and areas of cable protection, the magnitude of impact for the scallop dredge fishery is assessed as **medium**.

14.9.3.18 **UK beam trawl:** Landing statistics show very low recorded landings by the UK beam trawl fleet from ICES rectangles in the local study area, which overlap the offshore export cable corridor, over the period 2012-2023, with less than £1,000 landed cumulatively from 2019 to 2023. Other ICES rectangles within the regional study area show only very limited activity by this fleet, with a recent annual average value of approximately £5,000 recorded between 2019 and 2023. This is supported by VMS data, which show no evidence of beam trawl activity overlapping the offshore export cable corridor.

14.9.3.19 On this basis, the UK beam trawl fleet would not be directly affected by temporary loss of access within the offshore export cable corridor during the construction stage, as there is no evidence of routinely targeted beam trawl grounds in this area. Given the negligible value of this fishery within the corridor, as evidenced by landing statistics, VMS data, and fishing industry plotter data (**Volume 3, Appendix 14.1**), the impact during construction is assessed as occurring over a 12-year period and of **Very Low** magnitude.

14.9.3.20 **UK potting:** Scottish Government inshore mapping of the value of catch by under 12m length vessels illustrate moderate-high values across the offshore export cable corridor, with most potting activity occurring within 6nm of the shore (see **Volume 3, Appendix 14.1**). The NERIFG mapping corroborates this and both spatial datasets indicate that important potting grounds are located in the inshore region, particularly 0nm to 3nm and extending out to 6nm. This is further corroborated by landings statistics; the nearshore portion of the offshore export cable corridor primarily overlaps ICES rectangle 44E8 where average annual landings values from potting vessels are £1.5 million (based on a twelve-year average from 2012-2023; £1.8 million from 2019-2023 and peaking in 2023 at £2.4 million), with key target species of brown crab, lobster and velvet crab.

14.9.3.21 Fishing vessel businesses that deploy potting gear will be required to relocate gear from areas under construction. This impact will be intermittent and temporary in nature. Overall, based on the value of the fishery, the activity across the offshore export cable corridor and the requirement to relocate gear during construction activities, the magnitude of impact for the potting fishery is assessed as **medium**.

14.9.3.22 **UK gear with line and hooks:** this jigging fishery is primarily a summer fishery targeting migrating mackerel. Landing statistics indicate a value of £227,000 mackerel landings by vessels using jigging gear (based on five-year average from 2019-2023) from ICES rectangle 44E8 (landings within the local study area are primarily associated with this ICES rectangle). Gear is unlikely to make contact with the seabed and is not left unattended in the same way as potting gear. Mackerel are a highly mobile species and opportunity to catch them is not likely to be impeded by construction activities within the offshore export cable corridor. Fishing vessels are expected to be able to avoid areas of construction with prior notification. Overall, the magnitude of impact for the line and hook fishery is assessed as **low**.

Significance of residual effect

14.9.3.23 The Project commitments (as shown in Table 14.8) include the use of Safety Zones during construction (M-031), advance notification of activities through Notices to Mariners and Kingfisher Bulletins (M-030), and the implementation of a Vessel Management and Navigational Safety Plan (M-039) to manage the movement and coordination of construction vessels. These measures will reduce spatial conflict between project activities and fishing vessels, thereby minimising disruption from temporary loss of access to fishing grounds along the export cable corridor.

14.9.3.24 UK demersal otter trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.3.25 UK demersal seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.3.26 UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.3.27 Non-UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.3.28 UK scallop dredge: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.3.29 UK beam trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **very low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.3.30 UK potting: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.3.31 UK gear with hooks: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

Additional mitigation and residual significance

14.9.3.32 The Applicant is proposing a package of commitments and mitigation that will be delivered through the FMMCP including both embedded commitments and additional mitigation where significant adverse effects have been identified.

14.9.3.33 Additional mitigation has been developed to address the reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor as defined in **Table 14.13**.

Table 14.13 Additional mitigation measures for commercial fisheries in relation to the offshore export cable corridor during the construction phase

ID	Environmental measure proposed	Relevance to commercial fisheries assessment
M-218	Disruption agreements shall be entered into in relation to the offshore export cable corridor, where significant impacts remain after minimisation and mitigation measures have been applied for any construction or pre-construction stage temporary disruption to fishers. Evidence-based commercial disturbance agreements with fishers shall only be implemented where residual impacts persist despite all reasonable mitigation. Disruption agreements shall include both protocols for how the parties will act during the construction period and, where supported by an appropriate evidence base, payments designed to ensure that affected fishers are neither worse	Disruption Agreements provide a targeted mechanism to address significant construction stage impacts within the offshore export cable corridor, where exclusion from fishing grounds leads to moderate adverse effects identified in the assessment for Impact 2. By establishing protocols for engagement and, where evidence supports, financial payments, they ensure that fishers affected by temporary disruption are not left worse off. This measure directly mitigates predicted effects on both static and mobile fleets, particularly those most

ID	Environmental measure proposed	Relevance to commercial fisheries assessment
	nor better off as a result of development activities. Agreements shall be established with those targeting fisheries upon which the offshore export cable corridor has been identified, within the EIA Report, to have a significant impact during the construction stage. This requirement applies where significant impacts are identified for either static or mobile fishing fleets.	dependent on grounds intersecting the offshore export cable corridor.

14.9.3.34 Based on the commitment provided in Table 14.13Table 14.13and secured through the FMMCP, the residual effect of this impact during construction is reduced to **Minor Adverse** (**Not Significant**) for all receptors.

14.9.4 Impact C3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds

Overview

14.9.4.1 The maximum design scenario relating to the displacement from the Project leading to gear conflict and increased fishing pressure on adjacent grounds is presented in **Table** 14.7**.** Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.9.4.2 This impact considers displacement effects during construction related to both the OAA and offshore export cable corridor. Loss of access or exclusion from fishing grounds due to the Project may lead to increases in fishing effort in other areas that may already be exploited thereby leading to increased pressure and gear conflict.

14.9.4.3 This assessment of displacement has been undertaken with due regard to Scottish Government guidelines (Marine Scotland, 2022b) in defining the magnitude of impact to each receptor group and sensitivity of each commercial fishing fleet. The displacement considers both primary and secondary displacement, defined as follows:

- Primary displacement refers to the first instance of displacement where fishing effort is relocated to another area as a result of a change in the spatial environment. This corresponds to displacement that is a direct result of other licenced marine activities and associated infrastructure.
- Secondary displacement is an indirect effect of the other licenced marine activity and associated infrastructure. This occurs when the fishing effort that is relocated through primary displacement also displaces other fishing effort.

14.9.4.4 The guidance provides details on baseline data sources, highlighting that no single source of data can be used to comprehensively describe commercial fishing activity, due to the inherent limitations of each data source. Data sources are detailed in Section 13.5, together with associated limitations and uncertainties. The guidance specifically recommends the following steps (Scottish Government, 2022a):

- clear understanding of the commercial fishing 'receptors' for which impacts will be assessed, the fishing methods which are operated in the study area, including the areas where fishing activity may be relocated;
- identification of the likely maximum distance of displacement by the receptors, and the potential spatial extent of displacement effects for the fishing vessels which are already operational in the area which vessels are displaced to;
- identification of potential impacts on displaced commercial fisheries from the area that vessels are initially displaced from;
- identification of potential impacts on any fishing vessel operators / owners which are already active in the area in which vessels are displaced to and the potential for competition for space;
- establishing the sensitivity of each commercial fisheries receptor to displacement, with reference to the specifications;
- if possible, a quantitative assessment of magnitude (for example, taking account of spatial extent, duration, fishing effort, number of vessels); and
- consideration of primary and secondary displacement where applicable.

Sensitivity of receptor

14.9.4.5 The majority of UK mobile commercial fisheries fleets (including demersal otter trawl, demersal seine, dredge and beam trawl fisheries) operating within and around the Project are considered to have moderate availability of alternative fishing grounds, and an operational range that is not limited to the Project or commercial fisheries local study area. The proximity of the Project to key Scottish fishing ports of Peterhead and Fraserburgh is noted. The fishing grounds from the coast out to and overlapping the OAA, are considered by the local fleets to be 'inshore', in comparison to fishing grounds across the wider North Sea. For local fleets, including but not limited to vessels based at Peterhead and Fraserburgh, these 'inshore' grounds are particularly important in periods of inclement weather and have been identified as extremely important fishing areas in comparison to alternative fishing grounds. All mobile fleets are deemed to be of medium vulnerability, with medium recoverability. The sensitivity of all UK mobile fleets is therefore, considered to be **medium**.

14.9.4.6 For UK and non-UK pelagic trawl and purse seine fleets, the high level of alternative fishing grounds and lower reliance on the 'inshore' grounds closer to UK home ports results in a comparatively lower sensitivity than other mobile gear fleets. UK and non-UK pelagic fleets are deemed to be of low vulnerability, with medium recoverability; the sensitivity is therefore, considered to be **low**.

14.9.4.7 The UK potting and fleet operates across large areas inshore from 0nm to 12 nm. This form of static fishing gear is considered to have a high vulnerability to gear conflict interactions since it is left unattended on the seabed. There is potential for any displacement from mobile vessels to lead to exploration of other fishing grounds outside the Project, which includes areas currently targeted by potters. While grounds targeted by potters may not be suitable for other mobile gears due to substrate, the potential for gear conflict is well recognised and becomes a more prevalent concern with increasing marine spatial squeeze (Plymouth Marine Laboratory, 2024). In this context, potting is particularly sensitive to secondary displacement. The UK potting fleet are, therefore, deemed to be of high vulnerability, with medium recoverability. The sensitivity of the UK potting fleet is therefore, considered to be **medium**.

14.9.4.8 The hook and line jigging fishery is highly seasonal and targets a highly mobile species; the opportunity to catch mackerel is not likely to be impeded by Project construction activities and minimal displacement is anticipated. The sensitivity of this receptor is therefore, considered to be **low**.

Magnitude of impact

14.9.4.9 Conflict over diminished grounds may occur if displaced vessels explore grounds traditionally fished by other gear types; and / or displaced vessels relocate to actively fished grounds already targeted by the same gear. For example, this could include displaced demersal otter trawlers exploring areas fished by potters and thereby causing gear conflict or gear entanglement between potting lines and trawl gear and / or displaced demersal otter trawlers focusing effort in areas already fished by demersal otter trawlers and therefore increasing competition in that area. The impact is predicted to be of regional spatial extent, to occur over a 12-year period and to be continuous throughout the construction stage.

14.9.4.10 **UK demersal otter trawl**: The demersal otter trawl fleet is assessed to experience a medium adverse magnitude of impact. This is due to a relatively high level of fishing activity and landed value recorded within the local study area, particularly in proximity to key fishing ports that support regular landings by this fleet. These vessels have an operational range extending across the regional study area and further into the North Sea. However, local fleet behaviour and landings data indicate a strong degree of dependency on grounds within the local study area, suggesting that some vessels may be less inclined to relocate fishing activity far beyond these areas in response to displacement. In addition, inshore grounds can be more favourable to this fleet due to their proximity to port, reduced steaming times, and the availability of better weather conditions or weather windows, further reinforcing the reliance of some vessels on these nearer fishing grounds.

14.9.4.11 Although alternative fishing grounds are available, a portion of displaced activity would likely shift to grounds already routinely fished, potentially increasing pressure and competition. In parallel, the remainder could be redirected to less frequently used grounds, carrying the potential for spatial conflict with other fisheries. These factors, combined with the economic importance of the local study area to this fleet and the likely behavioural response to displacement, support a conclusion of **medium** magnitude.

14.9.4.12 **UK demersal seine**: The demersal seine fleet is assessed to experience a medium adverse magnitude of impact. Evidence from fisheries data indicates activity across the Project footprint, including both the OAA and the offshore export cable corridor, although at a lower spatial intensity than that recorded for the demersal otter trawl fleet. This lower level of activity is partly attributable to the smaller number of vessels operating this gear type, rather than an absence of fishing interest in the area. As with the demersal otter trawl fleet, the demersal seine fleet demonstrates a preference for grounds in close proximity to fishing ports, benefitting from shorter steaming times and more favourable weather windows. Accordingly, while overall activity is less intensive, the justifications for potential displacement effects are similar, and the impact on this fleet is considered to be of **medium** magnitude.

14.9.4.13 **UK and non-UK pelagic otter trawl and purse seine**: Pelagic fleets operate throughout the entirety of the North Sea, west of Scotland and Celtic Sea across a range of established fishing grounds. The fishery is highly seasonal. There are a limited number of pelagic vessels (for example, approximately 22 in the Scottish fleet) that operate across a wide area targeting highly mobile species and catching to an allocated quota level. Displacement is not expected to affect how pelagic vessels routinely operate. Overall, the magnitude of impact for the pelagic fleets is assessed as **low**.

14.9.4.14 **UK scallop dredge:** The scallop dredge fleet is assessed as experiencing a medium adverse magnitude of impact. These vessels operate over a wide area, including across the

regional study area and throughout other UK waters. However, the local study area includes known productive scallop grounds and benefits from its proximity to ports frequently used by the fleet, making it a valuable and actively targeted area within the fleet's broader operational range.

14.9.4.15 Loss of access or the need to avoid specific areas during construction may disrupt routine fishing patterns, and while this fleet generally demonstrates a high level of spatial mobility, the short- to medium-term displacement from familiar and high-value grounds may cause economic and operational disruption. As with the otter trawl fleet, this may also result in increased fishing pressure on alternative grounds or displace effort into new areas. The combination of value, activity level, and displacement consequences justifies a **medium** magnitude classification.

14.9.4.16 **UK beam trawl:** The beam trawl fleet is assessed to experience a very low adverse magnitude of impact. Fisheries evidence indicates negligible levels of activity across the Project footprint, including both the offshore array and the export cable corridor, with similarly low levels recorded across the wider local study area. The limited footprint of activity reflects the very small number of vessels operating this gear type in the region and the absence of routinely targeted beam trawl grounds within or adjacent to the development area. Given this negligible baseline, there is no indication of meaningful dependency on the affected grounds, and displacement effects are expected to be minimal. Accordingly, the impact on the beam trawl fleet is assessed as being of **very low** magnitude.

14.9.4.17 **UK potting:** Conflict over diminished grounds may occur if displaced vessels operating mobile gear (for example, dredge or demersal trawl) explore grounds traditionally fished by potters; and / or displaced potting gear is relocated into other actively fished potting grounds. Displacement of mobile gear may therefore increase the risk of interaction with potting gear.

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

- Alternative fishing grounds are available to relocate gear, in which case gear conflict and displacement effects will be low.
- Alternative fishing grounds are not available as adjacent areas are already being fished by potters, in which case the gear already on the ground limits the level of displacement. While there remains potential for gear conflicts and increased fishing pressure to arise, appropriately mitigated exclusion impacts will limit this.

14.9.4.19 In addition, there is a risk of secondary displacement, whereby potting vessels relocating into new grounds may, in turn, displace existing users of those areas. This can lead to a cascading effect, where competition for space intensifies and overall fishing pressure is redistributed unevenly. Such dynamics increase the potential for gear conflict, crowding, and reduced catch efficiency, particularly in inshore areas where available grounds are limited and spatial overlap between fleets is already high.

14.9.4.20 Taking these aspects into consideration, including the potential for both direct displacement and secondary displacement effects, the magnitude of the displacement impact is assessed to be **medium** for potting vessels.

14.9.4.21 **UK gear with line and hooks**: This fishery is highly seasonal and operated within inshore grounds. Displacement is expected to be short term across the portion of the offshore export cable corridor targeted; with effort likely to move into higher importance areas located outside the project boundaries. Overall, the magnitude of impact for the line and hook fishery is assessed as **low**.

Significance of residual effect

14.9.4.22 The Project commitments (as shown in **Table 14.8**) include delivery of the FMMCP (M-048), participation in fisheries working groups (M-051), and adherence to best practice guidance for fisheries liaison (M-052). These measures will support ongoing engagement with the fishing industry, enable the identification of emerging issues, and facilitate the development of appropriate mitigation to minimise the risk of gear conflict and increased fishing pressure on adjacent grounds as a result of displaced fishing activity.

14.9.4.23 UK demersal otter trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.4.24 UK demersal seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.4.25 UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.4.26 Non-UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.4.27 UK scallop dredge: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.4.28 UK beam trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **very low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.4.29 UK potting: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.9.4.30 UK gear with hooks: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

Additional mitigation and residual significance

14.9.4.31 The Applicant is proposing a package of commitments and mitigation that will be delivered through the FMMCP including both embedded commitments and additional mitigation where significant adverse effects have been identified.

14.9.4.32 Additional mitigation has been developed to address the reduction in access to, or exclusion from established fishing grounds within the OAA as defined in **Table 14.12** and within the offshore export cable corridor as defined in **Table 14.13**. These measures, specifically the Fisheries Fund for the OAA and the disruption agreements for the offshore export cable corridor, are also applicable to managing the effects of displacement, recognising the close interrelationship between access restrictions and the redistribution of fishing effort.

14.9.4.33 Based on the commitments provided in **Table 14.8**, **Table 14.12** and **Table 14.13,** and secured through the FMMCP, the residual effect of this impact during construction is reduced to **Minor Adverse** (**Not Significant**) for all receptors.

14.9.5 Impact C4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity

Overview

14.9.5.1 The maximum design scenario relating to disturbance of commercially important fish and shellfish resources is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.9.5.2 Noise and seabed disturbances during the construction stage may decrease or displace commercially important fish and shellfish populations from the area. This Section assesses the subsequent effect for the owners of fishing vessels, where commercially important stocks may be disturbed or displaced to a point where normal fishing practices would be affected.

Sensitivity of receptor

14.9.5.3 Exposure to the impact is likely and commercial fleets targeting key species may be affected, including haddock, whiting, herring, mackerel, scallop, Nephrops, brown crab, lobster and mixed demersal finfish.

14.9.5.4 Due to the importance of the local study area to vessels operating from local ports, together with the uncertainty around the effects of WTG floating units on fish and shellfish resources, the sensitivity of the receptor for all fisheries is therefore, considered to be **medium**.

Magnitude of impact

14.9.5.5 Detailed assessments of the following potential construction impacts on commercial important fish and shellfish species have been undertaken in **Chapter 10: Benthic, Epibenthic and Intertidal Ecology** and **Chapter 13: Fish Ecology**:

- temporary habitat loss and / or disturbance;
- temporary localised increases in suspended sediment concentrations (SSCs) and smothering;
- mortality, injury and behavioural changes resulting from underwater noise, vibration and particle motion, for example, unexploded ordnance (UXO) clearance;
- direct and indirect seabed disturbances leading to the release of sediment contaminants;
- changes in water quality; and
- increased risk of introduction and / or spread of marine invasive non-native species (INNS).

14.9.5.6 With respect to the magnitude of this impact on commercial fisheries, the overall significance of the effect on fish and shellfish species is considered (for instance, both the magnitude and sensitivity of fish and shellfish species are considered to assess the magnitude on commercial fishing fleets). This is because the overall effect on the fish and / or shellfish species relates directly to the availability and amount of exploitable resource.

For instance, where an effect of minor adverse significance is assessed for a species, a low magnitude is assessed for commercial fishing, and so on.

14.9.5.7 Details of the fish and shellfish ecology assessments, together with the supporting evidence and justification are provided in **Chapter 10: Benthic, Epibenthic and Intertidal Ecology** for shellfish species and **Chapter 13: Fish Ecology** for finfish species. These assessments found all construction impacts to be of **Negligible** to **Minor Adverse** significance for all commercially important fish and shellfish receptors.

14.9.5.8 The magnitude of impact is predicted to be of regional spatial extent, of relevance to international fishing fleets, to occur over a 12-year period and to be highly localised. It is predicted that the impact will affect the receptor directly through temporary loss of resources. The magnitude is therefore considered to be **low** for all species and in relation to commercial fisheries receptors, all fleets are deemed to have a **low** magnitude

Significance of residual effect

14.9.5.9 The Project commitments (as shown in **Table 14.8**) include the development of a CBRA (M-054) to optimise burial depths and reduce seabed disturbance, implementation of the Construction Method Statement (M-120) to manage construction phasing, and delivery of the PEMP (M-049) to track environmental change. These measures will minimise disturbance to seabed habitats and fish and shellfish resources, helping to reduce disruption to fishing activity during construction.

14.9.5.10 All commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.6 Impact C5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity

Overview

14.9.6.1 The maximum design scenario relating to increased vessel traffic associated with the Project is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.9.6.2 This impact assesses the likely significant effects arising from project related vessel traffic and changes to shipping patterns as a result of any potential navigational channels leading to interference with fishing activity (reduced access) during construction.

Sensitivity of receptor

14.9.6.3 Potting gear can be vulnerable to increased construction vessel movements within supply routes to and from entry and exit points due to risk of entanglement of construction vessel propellers with marker buoys of fishing gear. It is noted that construction vessels are likely to follow established shipping routes where possible. The sensitivity of the potting fleet is therefore, considered to be **medium.**

14.9.6.4 All other fishery fleets are expected to be in a position to avoid construction areas associated with the Project. The sensitivity of pelagic trawl, demersal trawl fisheries

(including otter trawl, demersal seine and beam trawl), the dredge fishery and hook and line fishery are considered to be **low**.

Magnitude of impact

14.9.6.5 Vessel movements (construction vessels transiting to and from areas undergoing construction works) related to the construction of Project and all associated infrastructure will add to the existing level of shipping activity in the area, see **Chapter 15: Shipping and Navigation** for a full assessment of additional vessel movements.

14.9.6.6 Up to 3,838 return trips by construction vessels (and site preparation vessels) with up to 10 construction vessels onsite at one time may occur throughout the construction stage and will include vessels which are Restricted in Ability to Manoeuvre (RAM). Project vessels will be managed by Marine Coordination, including the use of traffic management procedures such as the designation of entry and exit points to and from the buoyed construction area. Project vessels will also carry AIS and be compliant with relevant Flag State regulations, including the COLREGs, and comply with the procedures set out in the Vessel Management Plan (VMP) (which will be a condition of consent).

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

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

14.9.6.9 Additionally, the use of IALA G1162 (IALA, 2021) compliant lighting and marking including lights, marks, sounds, signals and other aids to navigation as required by the NLB and the MCA will further maximise awareness, both in day and night conditions including in restricted visibility. This includes the buoyed construction area, which will be agreed with the NLB prior to construction and within which Project vessels undertaking construction activities will most likely be located during construction activities. In addition, the Applicant will endeavour to agree shelter areas for construction vessels with the fishing industry to minimise impacts on fishing activities to the extent practicable.

14.9.6.10 It is noted that continuous liaison with the fishing industry will be undertaken including location and duration of construction activities; further details are provided in **Volume 3, Appendix 14.2.**

14.9.6.11 All fishing fleets are considered to be able to avoid vessel movements related to construction of the Project based on prior provision of construction details (timings and locations) allowing fishing vessels to plan their activities. This, alongside use of traffic management procedures including entry and exit points for Project related vessels; use of buoyed construction area and adherence to the VMP mean that the magnitude is therefore, considered to be **Low Adverse** for all fisheries.

Significance of residual effect

14.9.6.12 The Project commitments (as shown in **Table 14.8**) include the use of Safety Zones (M-031), the development and implementation of a Vessel Management and Navigational Safety Plan (M-039), and the provision of advance activity notifications through Notices to Mariners and Kingfisher Bulletins (M-030). These measures will help coordinate

construction vessel movements, improve situational awareness for other sea users, and reduce interference with fishing activity from increased vessel traffic during construction.

14.9.6.13 UK potting: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.6.14 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.7 Impact C6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project

Overview

14.9.7.1 The maximum design scenario relating to additional steaming to alternative fishing grounds is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.9.7.2 A detailed Navigational Risk Assessment (NRA) has been undertaken and is discussed in **Volume 3, Appendix 15.1: Navigational Risk Assessment**, which includes full consideration of commercial fishing vessels while transiting (for example, from a collision and allision perspective). This assessment focuses on the likely significant effects arising from longer steaming distances to alternative fishing grounds that would have otherwise been targeted within the Project boundaries.

Sensitivity of receptor

14.9.7.3 The UK potting fleet active in the local and regional study areas operate across a range of grounds to haul and re-set different fleets of traps / pots, typically on a daily basis. Their normal operating range is expected to be inshore from the OAA and include grounds overlapping the offshore export cable corridor, though it is noted that larger vivier vessels may operate across the OAA. Given adequate notification it is expected that these vessels will be in a position to avoid construction areas but that additional steaming time and associated costs may be necessary to reach alternative grounds. The sensitivity is therefore **medium.**

14.9.7.4 Pelagic trawl and purse seine fleets are considered to have moderate-high availability of alternative fishing grounds and a wide operational range throughout the North Sea, Celtic Sea and West of Scotland. Assuming prior notification which will allow fishers to plan fishing activities, the sensitivity of the receptor is therefore, considered to be **low** for pelagic trawl fleets.

14.9.7.5 For all other fleets, given the importance of inshore waters and the proximity of the grounds from shore out to the OAA with key ports of Peterhead and Fraserburgh, the sensitivity of increased steaming times is considered to be **medium**.

Magnitude of impact

14.9.7.6 Details of the construction activities will be promulgated in advance of, and during construction via the usual means (for example, NtMs, Kingfisher bulletin) so that mariners are made aware of the ongoing works. Localised construction works will necessitate minor

deviations for fishing vessels. Localised impacts are anticipated but will be limited to the immediate area of construction activity and associated construction vessels. The vessel route density data for fishing vessels indicates high levels of activity and clear transit routes in the inshore areas (0nm-12nm).

14.9.7.7 The demersal otter trawl fleet has identified key fishing grounds across the OAA, which are locally considered to be 'inshore' in comparison to wider north and central North Sea fishing grounds. Given adequate notification it is expected that these vessels will be in a position to avoid construction areas and the Project, although some additional steaming time may be required to reach alternative grounds. The normal operational range of vessels that target the OAA extends across the entirety of ICES rectangle 45E9 and further offshore to the east, as well as inshore areas including the Moray Firth. These vessels typically exhibit wide spatial flexibility, varying their fishing locations in response to factors such as weather, ground conditions, and seasonal patterns in target species distribution. On this basis, the magnitude of impact for the demersal otter trawl fishery is assessed as **low**.

14.9.7.8 For all other fleets with prior notification of construction activities, it is not expected that considerable additional steaming would be required to access fishing grounds outside those normally targeted within the Project. There may be an inconvenience to plan fishing around the construction activities, but this is not expected to result in additional steaming requirements above normal operating practices. The impact is predicted to be of regional spatial extent, medium term duration, intermittent and with high reversibility. It is predicted that the impact will affect the receptor directly. Based on the justifications above, the magnitude is therefore, considered to be **low** for all other fisheries.

Significance of residual effect

14.9.7.9 The Project commitments (as shown in **Table 14.8**) include participation in fisheries working groups (M-051), the appointment of a CFLO (M-053), and delivery of the FMMCP (M-048). These measures will provide structured and ongoing liaison with the fishing industry, enabling effective communication of construction schedules and locations to allow fishers to plan activity and mitigate disruption and additional steaming requirements.

14.9.7.10 UK demersal otter trawl: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.7.11 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.8 Impact C7: Increased snagging risk, which could result in loss or damage to fishing gear

Overview

14.9.8.1 The maximum design scenario relating to increased snagging risk, which could result in loss or damage to fishing gear is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.9.8.2 The physical presence of semi-constructed infrastructure on the seabed represents potential snagging points for fishing gear and could lead to damage to, or loss of, fishing gear. The safety aspects including potential loss of life as a result of snagging risk are assessed within **Chapter 15: Shipping and Navigation**.

14.9.8.3 Throughout the construction stage, safety zones will be applied for including up to 500m around structures where vessels are undertaking construction work and 50m around partially completed or completed surface piercing structures prior to commissioning of the wind farm.

Sensitivity or value of receptor

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

14.9.8.5 Potting and line / jigging gear show a lower vulnerability as the gear is placed, not towed and is less likely to penetrate the seabed. The sensitivity of potters and line / jigging vessels is considered to be **low**.

14.9.8.6 Pelagic trawl gear does not come into contact with the seabed and therefore has low vulnerability to snagging seabed infrastructure, although snagging infrastructure within the water column remains a possibility including mooring lines. The sensitivity of pelagic trawl fleets is considered to be **medium**.

Magnitude of impact

14.9.8.7 In the instance that snagging does occur, the Applicant will work to the protocols laid out within the guidance produced by the FLOWW group , in particular section 11: Dealing with claims for loss or damage of gear (FLOWW, 2014) and section 7: Disruption settlements, protocols for lost/damaged gear, and fisheries community funds (FLOWW, 2025) (this is defined as embedded environmental measure M-052 in **Table 14.8**).

14.9.8.8 Snagging poses a risk to fishing equipment and in extreme cases may potentially lead to capsize of vessel and crew fatalities, as well as damage to subsea infrastructure. Three scenarios of interaction are possible: initial impact of gear and subsea infrastructure; pullover of gear across subsea infrastructure; and snagging or hooking of gear on the subsea infrastructure. The snagging or hooking of fishing gear with infrastructure / cables on the seabed is the most hazardous to the vessel and crew due to the possibility of capsizing.

14.9.8.9 It is considered likely that fishermen will operate appropriately (adhering to safety zones and advisory distances and avoiding under construction infrastructure and cable protection at the defined locations) given adequate notification of the locations of any snagging hazards and are highly likely to avoid the under-construction infrastructure and cable protection within the Project.

14.9.8.10 Based on the embedded commitment to follow standard protocols should snagging occur, the magnitude is considered to be **low** for all fleets.

Significance of residual effect

14.9.8.11 The Project commitments (as shown in **Table 14.8**) include the development of a CBRA (M-054) and CaP (M-029) to determine appropriate burial depths and protection methods, as well as a commitment to recover any dropped objects from the seabed where safe and practicable (M-050) and to follow FLOWW guidance (M-052), which includes a process for

dealing with loss or damage to gear. These measures will minimise the presence of seabed obstructions and reduce the risk of gear snagging, thereby limiting the potential for gear damage or loss to fishing vessels.

14.9.8.12 UK potting and gear with hooks: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.8.13 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.9.8.14 A summary of the residual effects arising from the construction stage of the Project are provided in **Table 14.14**Error! Reference source not found..

14.10 Assessment of effects: O&M stage

14.10.1 Introduction

14.10.1.1 This Section provides an assessment of the effects for commercial fisheries from the O&M of the offshore elements of the Project.

14.10.1.2 The assessment methodology set out in **Section 14.8** has been applied to assess effects to commercial fisheries from the Project.

14.10.2 Impact O1: Reduction in access to, or exclusion from, established fishing grounds within the OAA

Overview

14.10.2.1 The maximum design scenario relating to the reduction in access or exclusion within the OAA is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.10.2.2 Reduction in access to, or exclusion from established fishing grounds within the OAA may arise due to the physical presence of the WTGs and WTG floating units, including mooring and anchoring systems, offshore substations, subsea substations, SDCs, RCPs and array cables, as well as O&M activities within the OAA.

14.10.2.3 Given the mooring line radius of 800m and minimum turbine spacing of 800m, together with the total mooring footprint of 425km^2 (i.e. 62% of the OAA) it is assumed that fishing is not prohibited from resumption but is unlikely to resume within the OAA throughout the O&M stage. This assumption that fishing will not resume within the OAA is applied to all commercial fisheries receptors. This impact is long term, occurring throughout the operational lifetime of 35 years per phase of operation.

Sensitivity or value of receptor

14.10.2.4 The sensitivity is as described for Impact C1, summarised as medium for UK demersal otter trawl and demersal seine; low for UK scallop dredge and UK beam trawl and medium for all other fleets.

Magnitude of impact

14.10.2.5 The construction impact assumed that fishing would not resume within areas of the OAA for a period of 12 years, while the O&M impact assumes that fishing would not resume for a longer duration of 35 years. During the construction stage, fishers are likely to have adapted to the presence of the OAA by modifying their operations to avoid the area and some level of displacement to other grounds is expected to occur. This response and adaptation is expected to continue throughout the operational stage. The assumption that fishing will not resume is supported by the reduced operational viability of fishing within the OAA due to the density of infrastructure in the water column, the presence of mooring lines, and the limited turbine spacing, all of which create practical and operational constraints for most commercial fishing methods. The magnitude of impact during the O&M stage is therefore assessed at the same level as Impact C1.

14.10.2.6 The magnitude of impact is therefore summarised as **medium** for UK demersal otter trawl; **low** for UK demersal seine; **low** for UK and non-UK pelagic otter trawl and purse seine fleets; **very low** for UK beam trawl and UK dredge; **low** for UK potting; and **very low** for UK hook and line.

Significance of residual effect

14.10.2.7 The Project commitments (as shown in **Table 14.8**) include the implementation of Safety Zones during construction, O&M and decommissioning (M-031), advance notification of activities through Notices to Mariners and Kingfisher Bulletins (M-030), and the development of a Vessel Management and Navigational Safety Plan (M-039) to manage vessel movements and interactions. These measures, alongside ongoing engagement through the FMMCP (M-048), will help reduce the risk of spatial conflict and minimise disruption to commercial fisheries arising from temporary loss of access to fishing grounds.

14.10.2.8 UK demersal otter trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.10.2.9 UK demersal seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.2.10 UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low.** The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.2.11 Non-UK pelagic otter trawl and purse seine: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.2.12 UK scallop dredge: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **very low**. The effect is of **Negligible** (**Not Significant**) in EIA terms.

14.10.2.13 UK beam trawl: Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude is **very low**. The effect is of **Negligible** (**Not Significant**) in EIA terms.

14.10.2.14 UK potting: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.2.15 UK gear with hooks: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **very low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

Additional mitigation and residual significance

14.10.2.16 The Applicant is proposing a package of commitments and mitigation that will be delivered through the FMMCP including both embedded commitments and additional mitigation where significant adverse effects have been identified.

14.10.2.17 Additional mitigation has been developed to address the reduction in access to, or exclusion from established fishing grounds within the OAA as defined in **Table 14.12.** These measures are also applicable to managing the effects during the O&M stage, with the Fisheries Fund applicable for the first five years of operation.

14.10.2.18 Based on the commitments provided in **Table 14.12** and secured through the FMMCP, the residual effect of this impact during O&M remains **Moderate Adverse** (**Significant**) for UK demersal otter trawl.

14.10.2.19 This assessment and the resulting moderate adverse residual effect for UK demersal otter trawl fleet (including both whitefish and Nephrops targeted fisheries) takes account of the long term (35 year per phase) exclusion from the OAA for this receptor. While the Applicant is committed to the Access Corridor and a five-year Fisheries Fund, the assessment assumes fishing will not resume within the remainder of the OAA during the entirety of the operational stage. Knowledge from the fishing industry has highlighted the central portion of the OAA is targeted by whitefish demersal otter trawlers and the eastern edge and south-east corner is targeted by Nephrops demersal otter trawlers; both of these areas within the OAA are considered important to fisheries. On this basis, it is not possible to lower the significance of effect beyond **Moderate Adverse** for the UK demersal otter trawl.

14.10.3 Impact O2: Reduction in access to, or exclusion from, established fishing grounds within the offshore export cable corridor

Overview

14.10.3.1 The maximum design scenario relating to the reduction in access or exclusion within the OAA is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.10.3.2 The assessment assumes that commercial fisheries will be prevented from actively fishing within a total area of 4.2km^2 within the offshore export cable corridor, based on the worst-case cable protection scenario (i.e. cable protection type of rock placement along 20% of cable length). Protection methods may take the form of rock placement, concrete mattresses, rock / grout bags or frond mattresses. In addition, there will be 500m temporary safety zones around major maintenance activities related to remedial cable burial and cable repairs.

14.10.3.3 ESCA (2018) notes that cables are potentially subsea hazards, and that while great effort is made to bury and protect them, mariners should never assume that cables are completely buried. Furthermore, the Mariners Handbook (UK Hydrographic Office, 2004) advises that: every care should be taken to avoid anchoring, trawling, fishing, dredging, drilling or carrying out any other activity in the vicinity of cables which might damage them.

14.10.3.4 In addition, the MCA guidance MGN661 (MCA, 2021), advises that fishing vessels should avoid fishing activity near either side of submarine cables in order to minimize the risk of damage as much as possible.

14.10.3.5 Notwithstanding this, subsea cables are widespread throughout the North Sea, providing power and telecommunications links, and it is understood that for most gear types, with the exception of dredging, fishing does take place in the vicinity of subsea cables (Kingfisher Information Service - Offshore Renewable & Cable Awareness (KIS-ORCA) 2019).

14.10.3.6 The assessment is undertaken on the understanding that it is illegal to wilfully, or negligently, break or damage any submarine cable and that burial, or other forms of protection, and routine burial surveys or other activities undertaken by the cable owner do not indemnify other seabed users should their activities result in damage to it.

Sensitivity or value of receptor

14.10.3.7 The sensitivity is as described for Impact C2, summarised as **medium** for demersal otter trawl, demersal seine, dredge, beam trawl and potting fishing fleets; and **low** for hook and line and UK and non-UK pelagic otter trawl and purse seine fishing fleets.

Magnitude of impact

14.10.3.8 For the purposes of this assessment, it is assumed that through the CaP and DLSP, and pursuant to the measures in the FMMCP, fishers will be well informed of the location and integrity of the offshore export cables, including:

- locations of any cable protection;
- type and extent of cable protection;
- details / results of routine cable integrity surveys; and
- location and schedule for any maintenance works.

14.10.3.9 Based on this knowledge it is assumed that fishers will seek to exploit grounds across the offshore export cable corridor with caution. The assessment therefore assumes that fishing will resume within the vicinity of the offshore export cable corridor, and that fishers will comply with MGN661 (MCA, 2021).

14.10.3.10 Notices to Mariners will be issued in advance of any maintenance works. Potting vessels may be required to temporarily relocate pots during maintenance works, although such works are likely to be infrequent.

14.10.3.11 Gear targeting pelagic species does not normally come into contact with the seabed and therefore the presence of the offshore export cables will not affect potential fishing opportunities for UK and non-UK pelagic trawl and purse seine and hook and line fishing fleets.

14.10.3.12 Given that fishing is likely to resume across the majority of the offshore export cable corridor, with exception of the cable protection and final location of the cable, the magnitude is considered to be **very low** for beam trawl (due to negligible activity in the area) and **low adverse** for all other fishing fleets.

Significance of residual effect

14.10.3.13 The Project commitments (as shown in **Table 14.8**) include the use of Safety Zones during construction (M-031), advance notification of activities through Notices to Mariners and Kingfisher Bulletins (M-030), and the implementation of a Vessel Management and Navigational Safety Plan (M-039) to manage the movement and coordination of construction vessels. These measures will reduce spatial conflict between project activities and fishing vessels, thereby minimising disruption from temporary loss of access to fishing grounds along the export cable corridor.

14.10.3.14 UK demersal otter trawl, UK demersal seine, UK dredge, UK potting: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.3.15 UK beam trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **very low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.3.16 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.4 Impact O3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds

Overview

14.10.4.1 The maximum design scenario relating to the displacement from the Project leading to gear conflict and increased fishing pressure on adjacent grounds is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.10.4.2 Loss of access or exclusion from fishing grounds during O&M of the Project may lead to increases in fishing effort in other areas that may already be exploited thereby leading to gear conflict and increased pressure on adjacent fishing grounds.

Sensitivity of receptor

14.10.4.3 The sensitivity is as described for construction, summarised as **medium** for demersal otter trawl, demersal seine, dredge, beam trawl, and potting; and **low** for the UK and non-UK pelagic otter trawl and purse seine fishing fleets and the hook and line fleet.

Magnitude of impact

14.10.4.4 During the operational stage it is assumed that fishing will resume within the offshore export cable corridor for all gears and will not resume within the OAA for all fishing fleets. There is potential for fleets to adapt to the presence of the floating OAA and for displacement effects to lessen with time. The magnitude of impact is therefore considered to be low adverse for all fleets, except demersal otter trawl.

14.10.4.5 For UK demersal otter trawl fleet, the magnitude of impact is considered to be medium due to the continued exclusion from the OAA throughout the entire O&M phase. It is expected that displacement will occur to other areas that are already fished, as well as to wider exploratory grounds, meaning that fishing effort will not cease entirely but will instead redistribute with varying degrees of intensity. It is reasonable to assume that individual skippers will prioritise their own established and most productive grounds, adapting fishing patterns based on experience and operational knowledge. While the fleet is expected to demonstrate adaptive behaviour over time, the long duration (35 years per phase of operation) of the exclusion results in the magnitude of impact assessed as **medium**.

Significance of residual effect

14.10.4.6 The Project commitments (as shown in **Table 14.8**) include delivery of the FMMCP (M-048), participation in fisheries working groups (M-051), and adherence to best practice guidance for fisheries liaison (M-052). These measures will support ongoing engagement with the fishing industry, enable the identification of emerging issues, and facilitate the development of appropriate mitigation to minimise the risk of gear conflict and increased fishing pressure on adjacent grounds as a result of displaced fishing activity.

14.10.4.7 UK demersal otter trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **medium**. The effect is of **Moderate Adverse** (**Significant**) in EIA terms.

14.10.4.8 UK demersal seine, UK dredge, UK potting: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.4.9 UK beam trawl: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **very low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.4.10 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

Additional mitigation and residual significance

14.10.4.11 The Applicant is proposing a package of commitments and mitigation that will be delivered through the FMMCP including both embedded environmental measures and additional mitigation where significant adverse effects have been identified.

14.10.4.12 Additional mitigation has been developed to address the reduction in access to, or exclusion from established fishing grounds within the OAA as defined in **Table 14.12** These measures are also applicable to managing the effects during the O&M stage, with the Fisheries Fund applicable for the first five years of operation.

14.10.4.13 The proposed mitigation, particularly the Fisheries Fund, is considered effective as it directly targets the key pressures identified in the assessment, namely reduced access to fishing grounds and the need for operational adaptation to limit displacement. While it does not provide direct compensation to individual fishing businesses, the Fund supports the broader resilience and long-term sustainability of commercial fisheries by investing in research, stock enhancement, and collaborative initiatives such as gear innovation and diversification. This sector-level approach enables adaptation to changing spatial and operational conditions, helping to maintain viable and sustainable fishing opportunities and contributing to the continued sustainability of the catch and the industry as a whole.

14.10.4.14 Based on the proposed mitigation provided in **Table 14.12** and secured through the FMMCP, the residual effect is therefore reduced to **Minor Adverse** (**Not Significant**) for the UK demersal otter trawl fleet.

14.10.5 Impact O4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity

Overview

14.10.5.1 The maximum design scenario relating to disturbance of commercially important fish and shellfish resources is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.10.5.2 Habitat loss, EMF and noise disturbances during the O&M stage may decrease or displace commercially important fish and shellfish populations from the area. This Section assesses the subsequent effect for the owners of fishing vessels, where commercially important stocks may be disturbed or displaced to a point where normal fishing practices would be affected.

Sensitivity or value of receptor

14.10.5.3 Exposure to the impact is likely and commercial fleets targeting key species may be affected, including haddock, monkfish, whiting, herring, mackerel, Nephrops, scallop, brown crab, lobster, and other demersal finfish.

14.10.5.4 Due to the range of areas targeted and the distribution of key commercial species throughout the northern, central and southern North Sea, all fleets are deemed to be of low vulnerability and high recoverability. The sensitivity of the receptor for all fisheries is therefore, considered to be **medium.**

Magnitude of impact

14.10.5.5 Detailed assessments of the following potential O&M impacts have been undertaken in **Chapter 10: Benthic, Epibenthic and Intertidal Ecology** and **Chapter 13: Fish Ecology**:

- temporary habitat loss and disturbance;
- long-term habitat loss and / or disturbance due to presence of offshore substation foundations, scour protection and cable protection;
- introduction / colonisation of hard substrate;
- temporary localised increases in SSC and smothering;
- effects arising from underwater noise, vibration and particle motion;
- EMF effects arising from cables;
- heat effects arising from cables;
- direct and indirect seabed disturbances leading to the release of sediment contaminants;
- secondary entanglement risk; and
- increased risk of introduction and / or spread of INNS.

14.10.5.6 The fish and shellfish ecology assessment found all O&M impacts to be of **Negligible** to **Minor Adverse** significance for all fish and shellfish receptors. The potential effect on resources is not expected to be beyond what could be discernible from baseline conditions for fish and shellfish resources.

14.10.5.7 The magnitude of impact is predicted to be of regional spatial extent, of relevance to international fishing fleets, of long-term duration (35 years per phase of operation) and to affect the receptor directly. The magnitude is therefore considered to be **low adverse** for all species and all potential resource impacts.

Significance of residual effect

14.10.5.8 The Project commitments (as shown in **Table 14.8**) include the development of a CBRA (M-054) to optimise burial depths and reduce seabed disturbance, implementation of the Construction Method Statement (M-120) to manage construction phasing, and delivery of the PEMP (M-049) to track environmental change. These measures will minimise disturbance to seabed habitats and fish and shellfish resources, helping to reduce disruption to fishing activity during construction.

14.10.5.9 All commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.6 Impact O5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity

Overview

14.10.6.1 The maximum design scenario relating to increased vessel traffic associated with the Project is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.10.6.2 This Section assesses the likely significant effects arising from project related vessel traffic and changes to shipping patterns as a result of any potential navigational channels leading to interference with fishing activity (reduced access) during O&M stage.

Sensitivity of receptor

14.10.6.3 The sensitivity is as described for Impact C5, summarised as **medium** for the potting fishing fleet; and **low** for all other fleets.

Magnitude of impact

14.10.6.4 The maximum number of Project vessel return trips during the O&M period is 1,350 annually and will include vessels which are RAM. The maximum number of vessels onsite at one time during the O&M period is five5.

14.10.6.5 As per the construction stage as described under Impact 5, Project vessels will be managed by Marine Coordination, carry AIS and being compliant with relevant Flag State regulations. Also, safety zones will be applied for including up to 500m around structures where vessels are undertaking major maintenance work.

14.10.6.6 The magnitude of impact of interference of fishing activity due to the presence and transiting of maintenance vessels during the O&M stage is decreased compared to in the construction stage given that fewer project vessels will generally be onsite at any time, noting the much longer duration of the O&M stage. Based on the low level of project related vessel activity across a long time period (35 years of operation per phase), the magnitude is therefore, considered to be **low adverse** for all fisheries.

Significance of residual effect

14.10.6.7 The Project commitments (as shown in Table 14.8) include the use of Safety Zones (M-031), the development and implementation of a Vessel Management and Navigational Safety Plan (M-039), and the provision of advance activity notifications through Notices to Mariners and Kingfisher Bulletins (M-030). These measures will help coordinate construction vessel movements, improve situational awareness for other sea users, and reduce interference with fishing activity from increased vessel traffic during construction.

14.10.6.8 **UK potting**: Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.6.9 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.7 Impact O6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project

Overview

14.10.7.1 The maximum design scenario relating to additional steaming to alternative fishing grounds is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.10.7.2 A detailed NRA has been undertaken and is discussed in **Volume 3, Appendix 15.1**, which includes full consideration of commercial fishing vessels while transiting (for example, from a collision and allision perspective). This assessment focuses on the likely significant effects arising from longer steaming distances to alternative fishing grounds that would have otherwise been targeted within the Project, including all related infrastructure within the OAA and offshore export cable corridor.

Sensitivity of receptor

14.10.7.3 The sensitivity is as described for Impact C6, summarised as **low** for demersal otter trawl, demersal seine, pelagic trawl and purse seine fishing fleets; and **medium** for all other fleets.

Magnitude of impact

14.10.7.4 The magnitude of impact of increased steaming times due to the presence of the Project during the O&M stage is expected to be the same or similar to that during construction for all commercial fishing fleets. While the operational stage in longer duration (35 years) compared to construction, it is expected that fishing vessels will adjust to the presence of the OAA over time. It is also noted that commercial fishing vessels may choose to transit

through the OAA during the O&M stage. It is predicted that the impact will affect the receptor directly. Based on the justifications above, the magnitude is therefore, as described for Impact C6, summarised as **medium** for UK demersal otter trawl and **low** for all other fleets.

Significance of residual effect

14.10.7.5 The Project commitments (as shown in **Table 14.8**) include participation in fisheries working groups (M-051), the appointment of a CFLO (M-053), and delivery of the FMMCP (M-048). These measures will provide structured and ongoing liaison with the fishing industry, enabling effective communication of construction schedules and locations to allow fishers to plan activity and mitigate disruption and additional steaming requirements.

14.10.7.6 UK demersal otter trawl: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **medium**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.7.7 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.8 Impact O7: Increased snagging risk, which could result in loss or damage to fishing gear

Overview

14.10.8.1 The maximum design scenario relating to increased snagging risk, which could result in loss or damage to fishing gear is presented in **Table 14.7**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 14.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 14.8** have been implemented as part of the Project.

14.10.8.2 The physical presence of infrastructure on the seabed represents potential snagging points for fishing gear and could lead to damage to, or loss of, fishing gear. The safety aspects including potential loss of life as a result of snagging risk are assessed within **Chapter 15: Shipping and Navigation**.

14.10.8.3 During O&M stage, a 500m advisory safe passing distance around vessels undertaking major maintenance activities will be assumed around structures undergoing maintenance and associated vessels including remedial repair work to the offshore export cables as required.

14.10.8.4 Maintenance will include monitoring of cable burial integrity and condition of cable protection as defined in the CaP (see **Table 14.8**).

Sensitivity of receptor

14.10.8.5 The sensitivity is as described for Impact C7, summarised as **medium** for demersal otter trawl, demersal seine, dredge, beam trawl and pelagic trawl fishing fleets; and **low** for potting and hook and line fishing fleets.

Magnitude of impact

14.10.8.6 The protocols outlined for Impact C7, will be followed during operational stage. The magnitude of effect is considered to be the same as during construction, summarised as l**ow adverse** for all fleets.

Significance of residual effect

14.10.8.7 The Project commitments (as shown in **Table 14.8**) include the development of a CBRA (M-054) and CaP (M-029) to determine appropriate burial depths and protection methods, as well as a commitment to recover any dropped objects from the seabed where safe and practicable (M-050). These measures will minimise the presence of seabed obstructions and reduce the risk of gear snagging, thereby limiting the potential for gear damage or loss to fishing vessels.

14.10.8.8 UK potting and hook and line: Overall, it is predicted that the sensitivity of the receptors is **low**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.8.9 All other commercial fisheries receptors: Overall, it is predicted that the sensitivity of the receptors is **medium**, and the magnitude is **low**. The effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.10.8.10 A summary of the residual effects arising from the O&M stage of the Project are provided in **Table 14.14**.

14.11 Assessment of effects: Decommissioning stage

14.11.1 Introduction

14.11.1.1 This Section provides an assessment of the effects for commercial fisheries from the decommissioning of the offshore elements of the Project.

14.11.1.2 The assessment methodology set out in **Section 14.8** has been applied to assess effects to commercial fisheries from the Project.

14.11.2 Impact D1: Reduction in access to, or exclusion from established fishing grounds within the OAA

14.11.2.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction. The significance of effect is therefore **Moderate Adverse** (**Significant**) for demersal otter trawl, and **Minor Adverse** (**Not Significant**) to **Negligible** (**Not Significant**) for all other fleets.

14.11.2.2 Additional mitigation relevant to those fleets for which significant effects are identified is as described for Impact C1 in the construction stage.

14.11.2.3 While the formal designation of the Access Corridor applies primarily during construction and O&M, the principle of maintaining access will continue to apply during decommissioning. This means that no permanent or temporary obstacles (for example, moorings, anchors, or surface structures) will be placed within the Access Corridor during decommissioning works. Maintaining this clear zone is consistent with the commitment to minimise interference with fishing activities and supports continued access throughout all project stages, including decommissioning.

14.11.2.4 For all commercial fisheries receptors other than the demersal otter trawl fleet, the residual effect is assessed as **Minor Adverse** (**Not Significant**) in EIA terms. However, for the UK demersal otter trawl fleet, the additional mitigation in this instance does not lower the significance of effect, which remains **Moderate Adverse** (**Significant**). This reflects the continued exclusion from established fishing grounds within the OAA during decommissioning.

14.11.3 Impact D2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor

14.11.3.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction. The significance of effect is therefore moderate adverse for UK demersal otter trawl, demersal seine, dredge and potting, and minor adverse for all other receptors.

14.11.3.2 Additional mitigation relevant to those fleets for which significant effects are identified is as described for Impact C2 in the construction stage.

14.11.3.3 For all commercial fisheries receptors, the residual effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.11.4 Impact D3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds

14.11.4.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction. The significance of effect is therefore moderate adverse for UK demersal otter trawl, demersal seine, dredge and potting, and minor adverse for all other receptors.

14.11.4.2 Additional mitigation relevant to those fleets for which significant effects are identified is as described for Impact C3 in the construction stage.

14.11.4.3 For all commercial fisheries receptors, the residual effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.11.5 Impact D4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity

14.11.5.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction, though piling will not take place and thus significant impacts are not anticipated in relation to underwater noise.

14.11.5.2 For all commercial fisheries receptors, the residual effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.11.6 Impact D5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity

14.11.6.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction. For all commercial fisheries receptors, the residual effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.11.7 Impact D6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project

14.11.7.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction. For all commercial fisheries receptors, the residual effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.11.8 Impact D7: Increased snagging risk, which could result in loss or damage to fishing gear

14.11.8.1 The effects of decommissioning activities are expected to be the same or similar to the effects from construction. For all commercial fisheries receptors, the residual effect is of **Minor Adverse** (**Not Significant**) in EIA terms.

14.12 Summary of effects

14.12.1.1 A summary of the effects arising from construction, O&M and decommissioning stages of the Project in relation to commercial fisheries are summarised in **Table 14.14**.

Table 14.14 Summary of effects on commercial fisheries

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
Construction					
Impact C1: Reduction in access to, or exclusion from established fishing grounds within the OAA	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Low**	**Very low**	**Negligible (Not Significant)**.
	UK beam trawl.		**Low**	**Very low**	**Negligible (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Medium**	**Very low**	**Minor Adverse (Not Significant)**.
Impact C2: Reduction in	UK demersal otter trawl.	M-029 M-030	**Medium**	**Medium**	**Moderate Adverse (Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
access to, or exclusion from established fishing grounds within the offshore export cable corridor	Uk demersal seine.	M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK beam trawl.		**Medium**	**Very low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Impact C3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK demersal seine.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	UK scallop dredge.	M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK beam trawl.		**Medium**	**Very low**	**Minor (Not Significant)**.
	UK potting.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Impact C4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Uk demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	UK gear with hooks.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
Impact C5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK demersal seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Impact C6: Additional steaming to alternative fishing	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039	**Low**	**Medium**	**Minor Adverse (Not Significant)**.
	Uk demersal seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
grounds for vessels that would otherwise fish within the Project.	UK pelagic otter trawl and purse seine.	M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
Impact C7: Increased snagging risk, which could result in loss or damage to fishing gear.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	UK beam trawl.	M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
O&M					
Impact O1: Reduction in access to, or exclusion from established fishing grounds within the OAA.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Low**	**Very low**	**Negligible (Not Significant)**.
	UK beam trawl.		**Low**	**Very low**	**Negligible (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	UK gear with hooks.		**Medium**	**Very low**	**Minor Adverse (Not Significant)**.
Impact O2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Uk demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Very low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Impact O3: Displacement leading to gear conflict and	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
increased fishing pressure on adjacent grounds.	UK pelagic otter trawl and purse seine.	M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Negligible (Not Significant)**.
	UK beam trawl.		**Medium**	**Very low**	**Negligible (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Impact O4: Disturbance of commercially important fish and shellfish resources leading to displacement or disruption of fishing activity.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Uk demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	UK beam trawl.	M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
Impact O5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK demersal seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
Impact O6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Low**	**Medium**	**Minor Adverse (Not Significant)**.
	Uk demersal seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
Impact O7: Increased snagging risk, which could result in loss or damage to fishing gear.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	Non-UK pelagic otter trawl and purse seine.	M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Decommissioning					
Impact D1: Reduction in access to, or exclusion from established fishing grounds within the OAA.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Low**	**Very low**	**Negligible (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	UK beam trawl.	M-122 M-218 M-219 M-220 M-221 M-222	**Low**	**Very low**	**Negligible (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Medium**	**Very low**	**Minor Adverse (Not Significant)**.
Impact D2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	Uk demersal seine.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK beam trawl.		**Medium**	**Very low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
Impact D3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK demersal seine.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK beam trawl.		**Medium**	**Very low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Medium**	**Moderate Adverse (Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Impact D4: Disturbance of commercially important fish and shellfish resources	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Uk demersal seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
leading to displacement or disruption of fishing activity.	Non-UK pelagic otter trawl and purse seine.	M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
Impact D5: Increased vessel traffic associated with the Project within fishing grounds leading to interference with fishing activity.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219	**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK demersal seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Low**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
	UK potting.	M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
Impact D6: Additional steaming to alternative fishing grounds for vessels that would otherwise fish within the Project.	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Low**	**Medium**	**Minor Adverse (Not Significant)**.
	Uk demersal seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
Impact D7: Increased	UK demersal otter trawl.	M-029 M-030	**Medium**	**Low**	**Minor Adverse (Not Significant)**.

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance
snagging risk, which could result in loss or damage to fishing gear.	UK demersal seine.	M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	Non-UK pelagic otter trawl and purse seine.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK scallop dredge.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK beam trawl.		**Medium**	**Low**	**Minor Adverse (Not Significant)**.
	UK potting.		**Low**	**Low**	**Minor Adverse (Not Significant)**.
	UK gear with hooks.		**Low**	**Low**	**Minor Adverse (Not Significant)**.

14.13 Transboundary effects

14.13.1.1 Transboundary effects arise when impacts from a development with one European Economic Area (EEA) State affects the environment of another EEA State(s). A screening of transboundary effects have been carried out and is presented in Appendix 4B of the Scoping Report (MarramWind Ltd., 2023).

14.13.1.2 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.
- Effects on commercial fishing fleets from all EEA countries as a result of constraints on foreign commercial fishing activities operating in the Project, including pelagic trawling, and other gears. These effects may include reduction in access to fishing grounds and potential displacement of fishing effort from the OAA to alternative fishing grounds in EEA States, which will have direct implications to that fishing ground.

14.13.1.3 Effects on biological resources could occur over a range of ten to 100s of kilometres from the Project and could therefore interact with Norway, 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 Norwegian 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** (**Not Significant**) in EIA terms.

14.13.1.4 Effects on commercial fishing fleets could occur over a range of 100s of kilometres from the OAA (affecting fleets from other states that operate in the vicinity of the OAA) and could therefore interact with the following EEA states: the Netherlands, Germany, France, Denmark and Norway. Effects on these foreign commercial fishing fleets from EEA states, in terms of reduction in access to fishing grounds and displacement into alternative grounds including other EEZs, have therefore been intrinsically considered throughout the commercial fisheries EIA process and are consistent to those presented in the impact assessment and cumulative effects assessment, specifically relative to non-UK pelagic trawl fleets.

14.14 Inter-related effects

14.14.1.1 A description and assessment of the likely inter-related effects arising from the Project on commercial fisheries is provided in **Chapter 32: Inter-Related Effects**.

14.15 Assessment of cumulative effects

14.15.1.1 A description and assessment of the cumulative effects arising from the Project on commercial fisheries is provided in **Chapter 33: Cumulative Effects Assessment**.

14.16 Summary of residual likely significant effects

14.16.1.1 **Table 14.15** presents a summary of the residual likely significant effects on commercial fisheries receptors assessed in the Chapter.

Table 14.15 Summary of assessment of residual likely significant effects for commercial fisheries

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance	Additional mitigation measures	Assessment of residual likely significant effects
Construction							
Impact C1: Reduction in access to, or exclusion from established fishing grounds within the OAA	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-219 M-220 M-221 M-222	**Moderate Adverse** (**Significant**).
Impact C2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-218 M-219 M-220 M-221 M-222	**Minor Adverse** (**Not Significant**).
	Uk demersal seine.		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK scallop dredge.		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK potting.		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance	Additional mitigation measures	Assessment of residual likely significant effects
		M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222					
Impact C3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-218 M-219 M-220 M-221 M-222	**Minor Adverse** (**Not Significant**).
	UK demersal seine.		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK scallop dredge.		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK potting.		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance	Additional mitigation measures	Assessment of residual likely significant effects
O&M							
Impact O1: Reduction in access to, or exclusion from established fishing grounds within the OAA	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-219 M-220 M-221 M-222	**Moderate Adverse** (**Significant**).
Impact O3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	UK demersal otter trawl.	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-218 M-219 M-220 M-221 M-222	**Minor Adverse** (**Not Significant**).

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance	Additional mitigation measures	Assessment of residual likely significant effects
		M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222					
Decommissioning							
Impact D1: Reduction in access to, or exclusion from established fishing grounds within the OAA	UK demersal otter trawl	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-219 M-220 M-221 M-222	**Moderate Adverse** (**Significant**).

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance	Additional mitigation measures	Assessment of residual likely significant effects
Impact D2: Reduction in access to, or exclusion from established fishing grounds within the offshore export cable corridor	UK demersal otter trawl	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054 M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-218 M-219 M-220 M-221 M-222	**Minor Adverse** (**Not Significant**).
	Uk demersal seine		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK scallop dredge		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK potting		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
Impact D3: Displacement leading to gear conflict and increased fishing pressure on adjacent grounds	UK demersal otter trawl	M-029 M-030 M-031 M-038 M-039 M-048 M-049 M-050 M-051 M-052 M-053 M-054	**Medium**	**Medium**	**Moderate Adverse** (**Significant**).	M-218 M-219 M-220 M-221 M-222	**Minor Adverse** (**Not Significant**).
	UK demersal seine		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK scallop dredge		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).
	UK potting		**Medium**	**Medium**	**Moderate Adverse** (**Significant**).		**Minor Adverse** (**Not Significant**).

Activity and potential effect	Receptor	Embedded environmental measures	Sensitivity	Magnitude	Significance	Additional mitigation measures	Assessment of residual likely significant effects
		M-106 M-120 M-122 M-218 M-219 M-220 M-221 M-222.					

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14.18 Glossary and abbreviations

14.18.1 Abbreviations

Acronym	Definition
AIS	Automatic Identification System
CaP	Cable Plan
CBRA	Cable Burial Risk Assessment
Cefas	Centre for Environment, Fisheries, and Aquaculture Science
CFLO	Company Fisheries Liaison Officer
CIFA	Community Inshore Fisheries Alliance
Cm	Centimetres
CMS	Construction Method Statement
COWRIE	Collaborative Offshore Wind Research into The Environment
DCF	Data Collection Framework
DSLP	Development, Specification and Layout Plan
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMODnet	European Marine Observation and Data Network
EMSA	European Maritime Safety Agency
ESCA	European Subsea Cables Association
EU	European Union
FiSMaDiM	Fisheries Sensitivity Mapping and Displacement Modelling
FLO	Fisheries Liaison Officer
FLOWW	Fishing Liaison with Offshore Wind and Wet Renewables Group
FMMCP	Fisheries Mitigation, Monitoring and Communication Plan
FMMMS	Fisheries Monitoring, Management and Mitigation Strategy
ICES	International Council for the Exploration of the Sea
INNS	Invasive Non-Native Species
LMP	Lighting and Marking Plan
M	Metres
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate Licencing Operations Team

Acronym	Definition
MGN	Marine Guidance Notice
MHWS	Mean High Water Springs
MMO	Marine Management Organisation
MPA	Marine Protected Area
MSS	Marine Science Scotland
NERIFG	North East Regional Inshore Fisheries Group
NLB	Northern Lighthouse Board
nm	Nautical Miles
NMPi	National Marine Plan Interactive
NRA	Navigational Risk Assessment
O&M	Operation and maintenance
OOMP	Offshore Operations and Maintenance Plan
PEMP	Project Environmental Monitoring Programme
RAM	Restricted in Ability to Manoeuvre
RBS	Registration of Buyers and Sellers
RCP	Reactive Compensation Platform
s.36	Section 36
SAR	Swept Area Ratio
SDC	Subsea Distribution Centre
SFF	Scottish Fishermen’s Federation
SPFA	Scottish Pelagic Fisherman’s Association
SWFPA	Scottish White Fish Producers Association
TCA	Trade and Cooperation Agreement
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office
VMP	Vessel Management Plan
WTG	Wind turbine generator

14.18.2 Glossary of terms

Term	Definition
Automatic Identification System	A system by which vessels automatically broadcast their identity and key statistics including location, destination, length, speed and current status. Most commercial vessels and European Union fishing vessels over 15 metres (m) in length are required to carry AIS.
Beam trawl	A method of bottom trawling with a net that is held open by a beam, which is generally a heavy steel tube supported by steel trawl heads at each end. Tickler chains or chain mats, attached between the beam and the ground rope of the net, are used to disturb fish and crustaceans that rise up and fall back into the attached net.
Bycatch	Catch which is retained and sold but is not the target species for the fishery.
Commercial fishing	Any form of fishing activity legally undertaken where the catch is sold for taxable profit.
COVID-19 pandemic	The COVID-19 pandemic was a global outbreak of coronavirus, an infectious disease caused by the severe acute respiratory syndrome coronavirus, first identified in 2019.
Demersal Finfish species	Finfish species which live and feed on or near the seabed.
Demersal seine	A seine net is a long net, with or without a bag in the centre, which is set either from the shore or from a boat for surrounding a certain area and is operated with 2 (long) ropes fixed to its ends (for hauling and herding the fish).
Demersal trawl	A demersal trawl is a cone shaped net that is towed on the seabed to target demersal fish species.
Dhan	A marker flag made of very hard-wearing material located on a pole or buoy to mark location of fishing gear.
Disruption agreement	A formal agreement between the Applicant and a fishery that seeks to reduce disturbance or displacement to a fishery caused by the Project. Agreements may be supported by monetary payment for demonstrable loss of fishery access or economic disadvantage caused directly to active fishing vessels by disturbance or displacement by the Project.
Fish stock	Any natural population of fish which an isolated and self-perpetuating group of the same species.
Fishery	A group of vessel voyages which target the same species or use the same gear.
Fishing ground	An area of water or seabed targeted by fishing activity.
Fisheries fund	A fund established by the Applicant which is to be used to support a fishery in adapting to the presence of the Project, and / or for the general betterment of the members of an impacted fisheries community.

Term	Definition
Fishing mortality	Mortality due to fishing; death or removal of fish from a population due to fishing.
Fleet	A physical group of vessels sharing similar characteristics (for example, nationality).
Functional unit	A Nephrops functional unit is a geographic area used for managing and reporting on Nephrops populations.
Gear type	The method / equipment used for fishing.
iFISH Database	The Marine Management Organisation (MMO) fisheries database of commercial fisheries landings statistics for vessels registered in the UK.
International Council for the Exploration of the Seas Statistical Rectangles	ICES standardise the division of sea areas to enable statistical analysis of data. Each ICES statistical rectangle is '30 min latitude by 1 degree longitude' in size (approximately 30 x 30 nm). A number of rectangles are amalgamated to create ICES statistical areas.
Landings	Quantitative description of the amount of fish returned to port for sale, in terms of value or weight.
Maximum Sustainable Yield	Maximum Sustainable Yield (MSY) is the largest yield (catch, in tonnes) that can be taken from a specific fish stock over an indefinite period under constant environmental conditions. Fishing at MSY levels should ensure the capacity of the stock to continue to produce this level in the long term.
Métier	A homogenous subdivision, either of a fishery by vessel type or a fleet by voyage type.
Minimum Conservation Reference Size	For the protection and conservation of fisheries resources, MCRS are applied to certain species of fish and shellfish. The MCRS is the size of a living marine aquatic species below which restrictions or incentives apply that aim to avoid capture through fishing activity.
Minimum Landing Size	A technical measure that limits the size of fish or shellfish species that can be legally landed and sold. The MLS varies per species. With the implementation of the Landings Obligation, the existing MLS are changed into MCRS, but they will remain largely the same.
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 Finfish Species	Finfish species which live within the water column, not on or near the seabed or at the coasts.
Pelagic Trawl	A cone shaped net used to target fish species in the mid-water column.
Potting	Pots (which may be referred to as creels) are generally rigid structures into which fish or shellfish are guided or enticed through funnels that make entry easy but from which escape is difficult. There are many different styles and

Term	Definition
	designs, each one has been designed to suit the behaviour of its target species.
Quota	A proportion of the Total Allowable Catch for a fish stock.
Recruitment	Recruitment can be defined as the number of fish surviving to enter the fishery or to some life history stage such as settlement or maturity.
Scallop Dredge	A method to catch scallop using steel dredges with a leading bar fitted with a set of spring-loaded, downward pointing teeth. The teeth on the bar at the front of the dredge are approximately 120 mm in length, but typically only the front 20 mm penetrate the seabed to dislodge scallops from the sand. Behind this toothed bar (sword), a mat of steel rings is fitted. A heavy net cover (back) is laced to the frame, sides and to the after end of the mat to form a bag.
Scottish Seine	An encircling net shot in the open sea using very long ropes to lay out the net, and ropes on the seabed prior to towing the net closed and hauling from a boat under its own power.
Shellfish Species	Aquatic invertebrates with a hard outer covering, either a shell or a shell-like exoskeleton, that are commonly eaten as food.
Spawning	The act of releasing or depositing eggs (fish).
Spawning Stock Biomass	The combined weight (in tonnes) of all the fish of one specific stock that are old enough to spawn. It provides an indication of the status of the stock and the reproductive capacity of the stock.
Static Cables	Cables designed to be connected to fixed installations. These are not intended to flex.
Stock Assessment	An assessment of the biological stock of a species and its status in relation to defined references points for biomass and fishing mortality.
String	A series of static fishing gear (pots) joined together to form a single deployable linear line of pots.
Swept Area Ratio	Swept Area Ratio (derived from Vessel Monitoring System data) indicates the number of times per annum that a fishing gear makes contact with (or sweeps) the seabed surface. Surface Swept Area Ratio provides a proxy for fishing intensity.
Total Allowable Catch	TACs are catch limits, expressed in tonnes or numbers, that are set for some commercial fish stocks.
Vessel Monitoring System	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.
Vivier	Vivier crabbers are generally larger vessels with the ability to retain large numbers of live crab onboard in storage tanks.

MarramWind