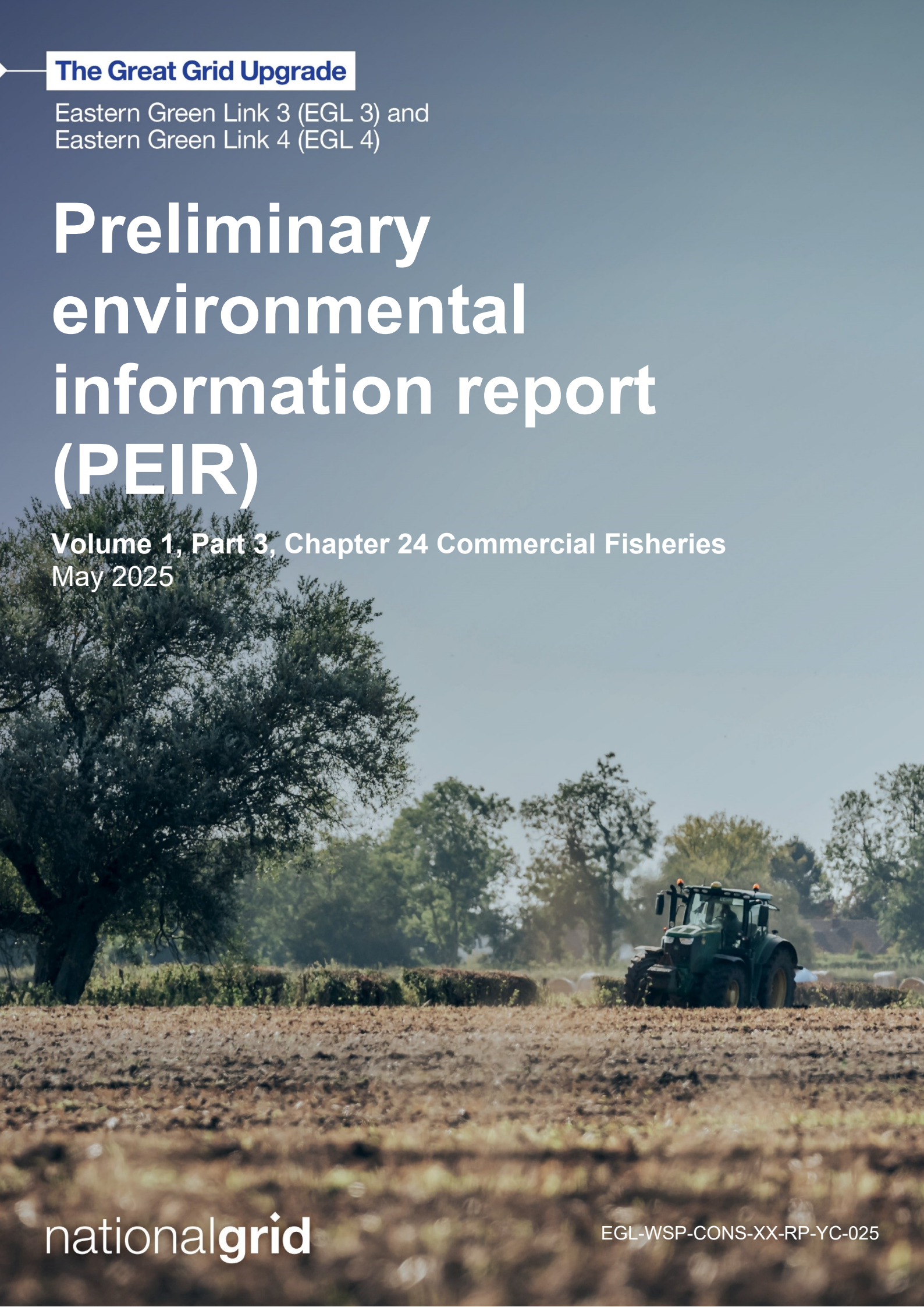
The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and
Eastern Green Link 4 (EGL 4)

Preliminary environmental information report (PEIR)

Volume 1, Part 3, Chapter 24 Commercial Fisheries

May 2025



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EGL-WSP-CONS-XX-RP-YC-025

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24. Commercial Fisheries

24.1 Introduction

24.1.1 This chapter presents the preliminary findings of the Environmental Impact Assessment (EIA) undertaken to date for the Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4) English Offshore Scheme with respect to Commercial Fisheries including pelagic fish (species that live within the water column), demersal fish (species live and feed on or near the bottom of seas or lakes), and shellfish (crustaceans and molluscs). The preliminary assessment is based on information obtained to date. It should be read in conjunction with the description of the Projects provided in **Volume 1, Part 1, Chapter 4: Description of the Projects.**

24.1.2 This chapter describes the methodology used, the datasets that have informed the preliminary assessment, baseline conditions, proposed environmental measures, and the effects that could result from the English Offshore Scheme during the construction, operation (and maintenance) and decommissioning phases. Specifically, it relates to the English offshore elements of EGL 3 and EGL 4 (the English Offshore Scheme) seaward of Mean High-Water Springs (MHWS) to Scottish Territorial waters.

24.1.3 This chapter should be read in conjunction with:

- **Volume 1, Part 3, Chapter 18 Coastal and Marine Physical Processes** - due to the association with hydrodynamics and sediment transport and the potential impact on commercial fish species.
- **Volume 1, Part 3, Chapter 20 Fish and Shellfish** - due to the close association between the receptors and the potential for overlapping environmental measures.
- **Volume 1, Part 3, Chapter 23 Shipping and Navigation** - due to the close association with vessel traffic within the English Offshore Scheme.
- **Volume 1, Part 3, Chapter 25 Other Marine Users** which will identify and assess the wider potential impact to other marine users (including recreational boating) beyond collision risk and potential disruption. Reference has been made to third-party assets within the Shipping and Navigation assessment due to their status as navigational features, however the assessment of any effects to these assets is referenced within the Other Marine Users chapter.

24.1.4 This chapter is supported by the following figures:

- **Volume 3, Part 3, Figure 24-1: Commercial Fisheries Study Area;**
- **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023;**
- **Volume 3, Part 3, Figure 24-3: Surveillance sightings by vessel gear type during 2018 to 2023;**
- **Volume 3, Part 3, Figure 24-4: Restricted fishing areas within proximity of the English Landfall;**
- **Volume 3, Part 3, Figure 24-5: Beam trawling and bottom otter trawl effort within the Study Area;**

- **Volume 3, Part 3, Figure 24-6: Bottom seines and dredging effort within the Study Area; and**
- **Volume 3, Part 3, Figure 24-7: Pelagic trawl and seine and static gear effort within the Study Area.**

24.1.5 This chapter is supported by the following appendices:

- **Volume 2, Part 3, Appendix 3.24.A: Supporting Commercial Fisheries Information;**
- **Volume 2, Part 3, Appendix 3.24.B: Fisheries Liaison and Coexistence Plan (FLCP);**
- **Volume 2, Part 1, Appendix 1.1.A: Scoping Opinion Responses;**
- **Volume 2, Part 1, Appendix 1.2.A: Regulatory and Planning Context;**
- **Volume 2, Part 1, Appendix 1.2.B: Marine Plan Assessment;**
- **Volume 2, Part 1, Appendix 1.5.A: Outline Register of Design Measures;**
- **Volume 2, Part 1, Appendix 1.5.B: Outline Code of Construction Practice;** and
- **Volume 2, Part 1, Appendix 1.5.C: Outline Construction Environmental Management Plan.**

24.1.6 As set out in **Volume 1, Part 1, Chapter 1: Introduction**, cable installation and some associated activities beyond 12 nautical miles (NM) are exempt under the Marine and Coastal Access Act (MCAA) as well as repair of the installed cable. This chapter presents a preliminary assessment of the cable route from MHWS at the Anderby Creek Landfall to the border with Scottish adjacent waters. This is to provide a holistic view of the English Offshore Scheme and any associated impacts, however consent is not being sought for the exempt cable (either installation or repair) and only cable protection and dredging for sand wave levelling would be included in the Deemed Marine Licence (dML) beyond 12 NM.

Limitations

24.1.7 The information provided in this Preliminary Environmental Information Report (PEIR) is preliminary and presents the initial assessment of effects on commercial fisheries with the purpose of securing feedback from stakeholders to inform the final assessment. The final assessment of potential significant effects will be reported in the Environmental Statement (ES). The PEIR has been produced to fulfil National Grid Electricity Transmission plc's (NGET) consultation duties in accordance with Section 42 of the PA2008 and enable consultees to develop an informed view of the preliminary potential significant effects of the English Offshore Scheme.

24.1.8 This PEIR has been collated based on a range of publicly available data and information only. It is assumed that the data collated is accurate, however it is acknowledged that there are limitations with the various data sets, with data potentially being under recorded, a number of data sources have therefore been used. This will be supplemented with feedback from stakeholder engagement where available.

24.1.9 It is acknowledged that publicly available statistics will underrepresent the inshore fleet; fishing vessels, for example <12 m are not required to carry Automatic Identification Systems (AIS). Landings data derived from the Marine Management Organisation (MMO) catch statistics provide a general overview of fishing effort as fishers are able to

sell catch directly in quantities <30 kg. Data will be supplemented with data received through consultation with the local fisheries stakeholders if available.

24.1.10 Variations and trends in commercial fisheries activity are an important aspect of the baseline assessment. Although statistics and consultation can identify past long-term trends, it is harder to predict future trends which may result from changes in market conditions, changes following the withdrawal of the UK from the European Union or global events such as conflict. Given the time period assessed, data may also reflect potential short-term changes in activity due to the 2020-2021 COVID pandemic, which temporarily affected market demand and supply chains.

24.1.11 Given the above limitations, a precautionary approach to the assessment would be adopted, data would continue to be gathered and updated as data are released and stakeholder engagement continues.

Preliminary significance conclusions

24.1.12 The preliminary commercial fisheries environmental assessment presented in **Section 24.10** to **Section 24.13** has concluded that all of the potential significant effects assessed are either Negligible or Minor adverse effects and are considered to be Not Significant. These adverse effects are ones that can be adequately controlled by best practice and legal controls and opportunities to reduce the significance of effects through mitigation may be limited. Further details of the methodology behind the assessment, and a detailed narrative of the assessment itself are provided within the sections below.

24.2 Relevant technical guidance

24.2.1 The legislation and planning policy which has informed the assessment of effects with respect to commercial fisheries is provided within **Volume 2, Part 1, Appendix 1.2.A Regulatory and Planning Context**. Further information on policies relevant to the English Offshore Scheme is provided in **Volume 1, Part 1, Chapter 2: Regulatory and Policy Overview.** A preliminary marine plan assessment is provided as **Volume 2, Part 1, Appendix 1.2.B Marine Plan Assessment.** Relevant technical guidance, specific to commercial fisheries, that has informed this PEIR and will inform the assessment within the ES is summarised below.

Technical guidance

24.2.2 A summary of the technical guidance for commercial fisheries is given in **Table 24-1.**

Table 24-1 – Technical guidance relevant to the commercial fisheries assessment

Technical guidance document	Context
Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison (FLOWW, 2014, REF 24.1)	Reference guidance commonly used on offshore projects to establish good relations between the fishing industry and offshore renewables sectors
Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Disruption	Reference guidance commonly used on offshore projects to establish good relations

Technical guidance document	Context
Settlements and Community Funds. (FLOWW, 2015, REF 24.2)	between the fishing industry and offshore renewables sectors
Changes to fishing practices around the UK as a result of the development of offshore windfarms. (Gray et al, 2016, REF 24.3)	Reference report written by the Crown Estate and NFFO looking at the changes in fishing practices in the Irish sea due to OWF developments
International Cable Protection Committee – Fishing and Submarine Cables Working together (ICPC, 2009, REF 24.4)	Reference report written by the ICPC about the cable and fishing industry working together.
Guidelines for data acquisition to support marine environmental assessments of offshore renewable energy projects (CEFAS, 2012, REF 24.5)	Reference report written by Cefas on best practices for data acquisition.
European Subsea Cable Association (ESCA) Guideline 20 on vessels operating in the vicinity of subsea cables (ESCA, 2018, REF 24.6)	Reference report written by ESCA about vessels working close to subsea cables.
Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments (SeaFish, 2012, REF 24.7)	Reference guidelines based on outputs from a technical workshop organised by the UK Fisheries Economics Network.

24.3 Consultation and engagement

Overview

24.3.1 The assessment has been informed by consultation responses and ongoing stakeholder engagement. An overview of the approach to consultation is provided in **Section 5.9** of **Chapter 5: PEIR Approach and Methodology**.

Scoping Opinion

24.3.2 A Scoping Opinion was adopted by the Secretary of State, administered by the Planning Inspectorate, on 05 September 2024. A summary of the relevant responses received in the Scoping Opinion in relation to commercial fisheries and confirmation of how these have been addressed within the assessment to date is presented in **Table 24-2.**

24.3.3 **Volume 2, Part 1, Appendix 1.1.A Scoping Opinion Responses** outlines the comments made in the Scoping Opinion in relation to commercial fisheries and how these have been addressed within this PEIR.

24.3.4 The information provided in the PEIR is preliminary, the Scoping Opinion comments have been addressed where possible at this stage, however some will be deferred to be addressed in the ES. It is likely that more comments will be received through stakeholder consultation process and such comments also will be addressed within the ES.

Table 24-2 – Summary of EIA Scoping Opinion responses for Commercial Fisheries

Consultee	Consideration	How addressed in this PEIR
The Planning Inspectorate	ID 5.7.1 - **Table 29-8** Loss of grounds due to presence of external cable protection -construction and decommissioning The Inspectorate agrees that the construction and decommissioning of the Proposed Development are unlikely to lead to permanent loss of fishing grounds due to presence of external cable protection and is content for this matter to be scoped out.	Applicant has noted agreement by Planning inspectorate. Matter continues to be scoped out of assessment.
The Planning Inspectorate	ID 5.7.2 - **Table 29-8** Temporary increase in deposition of suspended sediments -operation. The Scoping Report seeks to scope this matter out noting that the potential effects of localised repair works would be a lower magnitude than during construction. In the absence of information regarding the likely frequency and duration of maintenance activities and evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to agree to scope this matter out from the assessment at this stage. Accordingly, the ES should include an assessment of these matters, or the information referred to demonstrating agreement with the relevant consultation bodies or evidence to justify the absence of potential significant effects.	Applicant has noted this comment and has included a preliminary assessment for this impact in **Section 24.12.** and within **Volume 1, Part 3, Chapter 20 Fish and Shellfish.**
The Planning Inspectorate	ID 5.7.3 - **Table 29-8** Temporary increase and deposition of suspended sediments – decommissioning. The Inspectorate agrees that the significance of effects during decommissioning are likely to be similar or lower to construction effects and is content to scope this matter out of further assessment. However, should decommissioning activities result in a greater magnitude of effects or extend beyond the range of previous construction activities, the ES should provide an assessment of	The Applicant has noted this comment and has included a preliminary assessment for this impact in **Section 24.12.** and within **Volume 1, Part 3, Chapter 20 Fish and Shellfish.**

Consultee	Consideration	How addressed in this PEIR
	decommissioning activities on commercial fisheries.	
The Planning Inspectorate	ID 5.7.4 – Section 29.2. Baseline Data. When using landings data, any conservation or management measures for species captured in the vicinity of the offshore study area should be considered and acknowledged, as this may affect the species abundance and distribution within the cable route area. The Applicant should make efforts to include, or otherwise account for, vessels excluded from the Vessel Monitoring Systems (VMS) data. Baseline data should also be up to date as possible at the point of submission	The landings data for the PEIR was released in September 2024, for the previous year. We expect for the ES to use the data that is due to be released in September 2025. The Applicant would ensure that the most up to date data are used to inform the assessment and would further ensure that vessels not included in the VMS would be accounted for in the assessment. Direct engagement through our Fisheries Liaison Officer would support the baseline and assessments. Any species of conservation importance identified within the study area have been noted in the **Volume 1, Part 3, Chapter 20 Fish and Shellfish** in **Section 20.5**.
The Planning Inspectorate	ID 5.7.5 – Section 29.5. Assessment methodology The Scoping Report identifies the data sources that would be used to inform the baseline and refers to the assessment approach set out in Scoping Report, Chapter 21. However, it is not clear from the Scoping Report what methods would be used to carry out the assessment and whether the assessments would be qualitative or quantitative. The methodologies used must be described and their use justified with reference to appropriate guidance and/ or agreement with relevant consultation bodies. The Applicant is encouraged to ensure that they seek advice from all relevant stakeholders with expertise on this aspect, including the appropriate Inshore Fisheries and Conservation Authorities (IFCAs).	This is noted by the Applicant. The methodology is provided below in **Section 24.4** and would be discussed with fisheries stakeholders prior to the ES. The methodology was developed using industry guidance and is considered to be standard for the industry and proportionate for the type of projects being assessed. Consultation with fisheries stakeholders is ongoing, including with IFCAs.
The Planning Inspectorate	ID 5.7.6 – Section 29.6. Potential impacts The Scoping Report states that the potential impacts on fish and shellfish species will be addressed in the Fish and Shellfish ES Chapter and any impacts to	This is noted and cross referencing is provided in this chapter as relevant and the **Volume 1, Part 3, Chapter 20 Fish and Shellfish Sections 20.10** to

Consultee	Consideration	How addressed in this PEIR
	the navigation abilities of fishing vessels will be assessed in the Shipping and Navigation ES Chapter. The ES should provide clear cross-referencing to where relevant impacts on commercial fisheries have been assessed.	**20.16** and **Volume 1, Part 3, Chapter 23 Shipping and Navigation.**
The Planning Inspectorate	ID 5.7.7 Mitigations measures The Scoping Report does not refer to any proposed mitigation measures. The ES must clearly describe the measures to be employed in order to mitigate any potential significant effects of the Proposed Development on commercial fisheries.	The Applicant has described the mitigation in this report under the Environmental Measures sections of this chapter. A summary of all environmental measures is provided in **Volume 2, Part 1, Appendix 1.5.A: Outline Register of Design Measures**
The Planning Inspectorate	ID 5.7.8 Mitigations – timing of works The Scoping Report does not state whether the proposed construction and/ or operational activities are being scheduled to avoid key periods relating to commercial fishing activities. The Inspectorate advises that the Applicant should consider the timing of any proposed construction and/or operational maintenance activities as to avoid key periods relating to commercial fishing activities. Furthermore, any overlapping works should be assessed accordingly.	The preliminary assessments in **Section 24.10 to 24.13** concluded that no significant impacts from the Projects on their own. The Cumulative effects assessment will be completed for the ES which might conclude that additional environmental measures are required. As noted by the Planning Inspectorate, these could take the form of a seasonal restriction for certain activities within discrete locations within the draft Order Limits, subject to assessment outcomes, data confidence, and understanding of current spatiotemporal dynamics of the fisheries.

Technical engagement

24.3.5 Technical engagement with consultees in relation to commercial fisheries is ongoing. A summary of the technical engagement undertaken to date is outlined in **Table 24-3.**

Table 24-3 – Technical engagement on the environmental aspect assessment

Consultee	Consideration	How addressed in this PEIR
MMO	No concerns regarding commercial fisheries	n/a
Cefas	No concerns regarding commercial fisheries	n/a
Environment Agency	No concerns regarding commercial fisheries	n/a

Consultee	Consideration	How addressed in this PEIR
National Federation of Fishermen's Organisations (NFFO)	The NFFO noted that publicly available data sources are often an under-representation of fishing activity. It was noted as positive that with the draft Order Limits being further offshore, there would be a better chance that the AIS data was representative, but there are some under 12 m vessels operating 20-30 miles offshore nowadays. Asked if a FLCP would be produced for the Projects.	The Projects noted this comment and has noted this within the PEIR in **Section 24.1.9**. An FLO has already been appointed for the Projects and consultation with fisheries stakeholders, including with regards to the fisheries baseline, is on-going and would continue post-consent. Ongoing consultation between fisheries stakeholders and the FLO should fill any gaps in the public catch statistics. An outline FLCP has been provided with the PEIR (**Volume 2, Part 3, Appendix 3.24.B Fisheries Liaison and Coexistence Plan (FLCP)**) and would be included as an Outline Management Plan to accompany the DCO application.
NFFO	A follow up consultation meeting took place on 03/03/2025 to provide an update on the Projects. The NFFO highlighted the importance of employing a Fisheries Liaison Officer (FLO) for the Projects. The NFFO mentioned new guidelines are being produced by the European Subsea Cables Association (ESCA) in regard to cable guidelines surrounding cooperation agreements. The NFFO suggested looking at the FISMaDiM data source.	The applicant confirmed the Projects FLO is Brown and May. The applicant noted this comment and will include information once it is issued in the ES. The applicant noted this comment. This data source will be reviewed and included within the ES as noted in **Section 24.4.9.** It was not included within the PEIR as the recommendation was received too late in PEIR preparation.
Inshore Fisheries and Conservation Authorities (IFCA)	The Eastern IFCA asked how the Projects would treat IFCA byelaw areas.	Byelaws which have banned fishing within an area have been noted and would be treated the same as designated sites (e.g. MCZs and SACs). Byelaws which are monitoring certain catch were not deemed relevant and as such have not been noted. Relevant byelaws are listed in **Section 24.5.8** to **24.5.15**
Natural England	No concerns regarding commercial fisheries	n/a

24.3.6 Consultation with fisheries stakeholders is ongoing and would continue during the DCO process to discuss environmental measures, given the potential for significant cumulative displacement, due to the large number of offshore developments occurring concurrently on the east coast.

24.4 Data gathering methodology

24.4.1 This PEIR has been collated based on a range of publicly available data and information only. It is assumed that the data collated is accurate. The data has been supplemented with additional information acquired as part of the Stakeholder engagement process. The sources of data used is noted in **Table 24-4.**

Study area

24.4.2 The study area for Commercial fisheries, as illustrated in **Volume 3, Part 3 Figure 24-1: Commercial Fisheries Study Area,** includes the draft Order Limits, which encompasses both the EGL 3 Project and EGL 4 Project, plus an additional 15 km buffer either side. This is a precautionary maximum zone of influence that encompasses the potential impact pathways from underwater noise and increased suspended sediment concentrations. **Volume 1, Part 3, Chapter 18 Coastal and Marine Physical Processes** concluded that the majority of suspended sediment would settle within 700 m of the cable trench, very fine sands (<63 µm) may travel as far as 17.5 km dependant on the peak flow speed. However, sediment deposition beyond 700 m would be <2 mm and unnoticeable against normal background conditions. The 15 km buffer therefore remains precautionary.

24.4.3 The study area for commercial fisheries is also defined by the International Council for the Exploration of the Sea (ICES) rectangles in which the English Offshore Scheme lies. Each Rectangle is approximately 30 NM wide and is 30 min latitude and 1° longitude in size and is used to record and collate statistical fisheries data (ICES, 2022, REF 24.8).

24.4.4 The study area lies within ICES Area IVc (Southern North Sea) IVb (Greater North Sea) and consists of the following nine ICES rectangles: 35F0, 36F0, 37F0, 38E9, 38F0, 39E9, 40E9, 40E8 and 41E9.

Tidal River Works

24.4.5 In addition to the English Offshore Scheme works are proposed within a tidal river. The works consist of the following:

- Tidal river crossing of the River Nene and the River Welland by Horizontal Directional Drilling or trenchless solution beneath the bed of the rivers.
- Option for the construction of a Temporary Quay on the River Nene.

24.4.6 In respect to the Tidal River Crossings and in accordance with Article 35 of the 2011 Exempted Activities Order these activities are considered a ‘bored tunnel’ and exempt from needing a Marine Licence, as works would be carried wholly under the seabed there would be no interaction and no potential for significant adverse effects on the marine environment. Therefore, these works would not be included in the dMLs. Impacts relating to the drill entry and exit above MHWS are assessed in relevant chapters of the English Onshore Scheme in **Volume 1, Part 2**.

24.4.7 The River Nene Temporary Quay is an option being explored within the Projects design for delivery of components for the English Onshore Scheme. At this stage feasibility of

the temporary quay is still being explored, and insufficient information is available to complete a preliminary assessment. If taken forward, the ES will include a full assessment of effects of the temporary quay. **Section 24.14** outlines the further work that would be undertaken to inform the assessment.

Desk study

24.4.8 A summary of the organisations that have supplied data, together with the nature of that data is outlined in **Table 24-4.**

Table 24-4 – Data sources used to inform the commercial fisheries assessment

Organisation	Data source	Data provided
Inshore Fisheries and Conservation Authorities (IFCA, REF 24.9)	https://association-ifca.org.uk/	Website with information about fishing and the species in the different regional IFCAs
Environment Agency (REF 24.10)	https://www.data.gov.uk/	Transitional and Coastal Waters (TraC) Fish Monitoring Programme
Department of Energy & Climate Change (DECC, 2022, REF 24.11)	https://www.gov.uk/	Offshore Energy Strategic Environmental Assessment 4 (OESA4)
Marine Management Organisation (MMO, 2024, REF 24.12)	https://www.gov.uk/	UK Sea Fisheries annual statistics report 2023 and accompanying datasets which includes species catch list for the relevant ICES rectangles. Landings statistics for the period 2019- 2023 Aerial surveillance data for the period 2019- 2023
MMO (2024, REF 24.20-24.21)	Vessel Monitoring System (VMS) data	VMS data for the period 2018 – 2022
European Marine Observation and Data Network (EMODnet, REF 24.13)	https://emodnet.ec.europa.eu/en	Interactive reference website which shows fishing effort of European vessels
FishBase (REF 24.14)	www.fishbase.org	Species reference website
JNCC (REF 24.15)	https://jncc.gov.uk/	Species specific data, of native species of conservation interest UK

Organisation	Data source	Data provided
		BAP List of UK Priority Species | JNCC Resource Hub
Brown & May Marine Ltd (2023, REF 24.16)	Eastern Green Link Three and Four Transmission Reinforcement Cable Projects: Fishing Activity Report	Fisheries activities within the study area.
IUCN (REF 24.17)	https://www.iucnredlist.org	The International Convention for the Conservation of Nature (IUCN) Red List of Threatened Species
Eastern Green Link 2 Marine Scheme (REF 24.18)	Environmental Appraisal report for the Eastern Green Link 2 project.	Reference material as similar project type.
Cefas FiSMaDiM (Fisheries Sensitivity Mapping and Displacement Modelling, REF 24.19)	https://www.cefas.co.uk/expertise/research-advice-and-consultancy/offshore-and-marine-renewable-energy-omre/case-study-fismadim/	New dataset which highlights areas of high importance for the fishing industry which uses data from 2012 to 2021

24.4.9 It should be noted that a new dataset from Cefas, FiSMaDiM, was only released in February 2025 and has therefore not been analysed fully for the preliminary environmental assessment. On initial view it is a similar dataset to the EMODNet fishing effort which has been used within this chapter. Different from EMODNet is does shows areas of economic importance to the UK fisheries, it also looks at different gear type. The data gathered within this tool is up to 2021 which is the same as the EMODNet data. It is possible that newer data will be available in the future and this dataset will be analysed fully for the ES.

Survey work

24.4.10 There have been no specific surveys to inform the commercial fisheries assessment.

24.5 Overall baseline

24.5.1 The following section outlines the existing baseline conditions for Commercial fisheries.

Current baseline

Surveillance sightings and nationality

24.5.2 The study area, which is within the Southern and Greater North Sea, is fished by UK and European fleets and surveillance sightings have noted vessels from Belgium, Germany, Denmark, France, The Netherlands, Norway and Portugal. This is illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality**

during 2018 to 2023 which is based on surveillance sightings data from the MMO for the period of 2018 to 2023. This data shows that over 87 % of the sightings during this period are of UK vessels. The majority of these sightings are in the rectangles which are closest to the coastline, this is primarily due to the size of the vessels. The smaller < 10 m vessels tend to fish closer to shore whereas the bigger vessels have the ability to go further offshore. The majority of the European vessels sighted are in rectangles further offshore, this again is primarily due to the larger size of the European vessels.

24.5.3 These vessels use a variety of gear types and **Volume 3, Part 3, Figure 24-3: Surveillance sightings by vessel gear type during 2018 to 2023** illustrates the surveillance sightings of the different gear types. This data shows that 54.9 % of vessels are potter/whelkers, all of which are from the UK fleet. The majority of the potter/whelker vessels recorded sightings are within the 12 NM limit in ICES rectangles 36F0 and 40E8. This is also the case for scallop dredging vessels which are mostly sighted in rectangle 37F0. A detailed breakdown of the sightings within the study area is provided in **Table 24-5.**

Table 24-5 - Surveillance sightings by nationality and gear type (2018 - 2023)

Vessel Nationality	No Sightings	% of sightings
	464	54.9
	154	18.2
	73	8.64
	11	1.3
	8	0.94
	8	0.94
	5	0.59
	4	0.47
	4	0.47
	3	0.35
	1	0.11
	1	0.11
	1	0.11
	737	**87.13**
Belgium	2	0.23
	2	0.23
	4	**0.46**
German	2	0.23
	2	0.23

Vessel Nationality	No Sightings	% of sightings
	1	0.11
	5	**0.57**
Danish	19	2.25
	1	0.11
	1	0.11
	21	**2.47**
French	30	3.55
	5	0.59
	4	0.47
	4	0.47
	43	**5.08**
	14	1.65
	9	1.06
	6	0.71
	2	0.23
	1	0.11
	32	**3.76**
Norwegian	1	0.11
	1	**0.11**
Portuguese	1	0.11
	1	**0.11**

Catch value

24.5.4 The catch value for the under 10 m vessels is greatest in ICES rectangles 35F0 and 36F0 which are the closest to the English coastline and reduces greatly in the rectangles further offshore. For the over 10 m vessels, the highest catch value is in rectangle 37F0.

Table 24-6 - Annual UK catch value between 2019 to 2023 within the study area by vessel size

Rectangle	Vessels Under 10 m Weight in tonnes	Vessels Under 10 m value	Vessels Over 10 m weight in tonnes	Vessels Over 10 m value
35F0	5,155	£5,929,560.00	1,630	£3,692,495.00
36F0	3,110	£15,573,087.00	13,880.42	£37,350,369.00
37F0	224	£1,645,502.00	23,378	£24,621,957.00
38E9	835	£4,929,906.00	2,906	£8,298,066.00
38F0	2	£4,660.00	3,507	£4,542,391.00
39E9	55	£447,896.00	2,159	£8,775,441.00
40E8	742	£4,007,084.00	2,383	£11,486,307.00
40E9	53	£440,719.00	2,881.2	£2,345,401.00
41E9	0	£0.00	172.1	£480,904.00

Source MMO (2024, REF 24.12)

Local fishing fleet

24.5.5 There are 21 ports within the study area who have registered vessels which, due to their proximity, are likely to fish within the nine rectangles the draft Order Limits intersect. **Plate 24-1** illustrates the location of the ports and the total number of vessels which use it as a home port. These details have been broken down and are shown in **Table 24-7** which identifies the sizes of the registered vessels (over or under 10 m in length), whether they have licenses to catch shellfish and if they have a license to catch scallops. Please note there are no vessels under 10 m in length which have a license to catch scallops. Whilst **Plate 24-1** show ports along the East coast vessels from these ports may not be operating within the study area. Additionally non-UK vessels would also be operating within the study area. Numbers are indicative of the total number of vessels registered at the home port. Green = vessels <10 m, light blue = vessels 10-15 m, and dark blue = vessels >15 m length.

Plate 24-1: Illustration showing ports with vessels likely to be operating within the study area

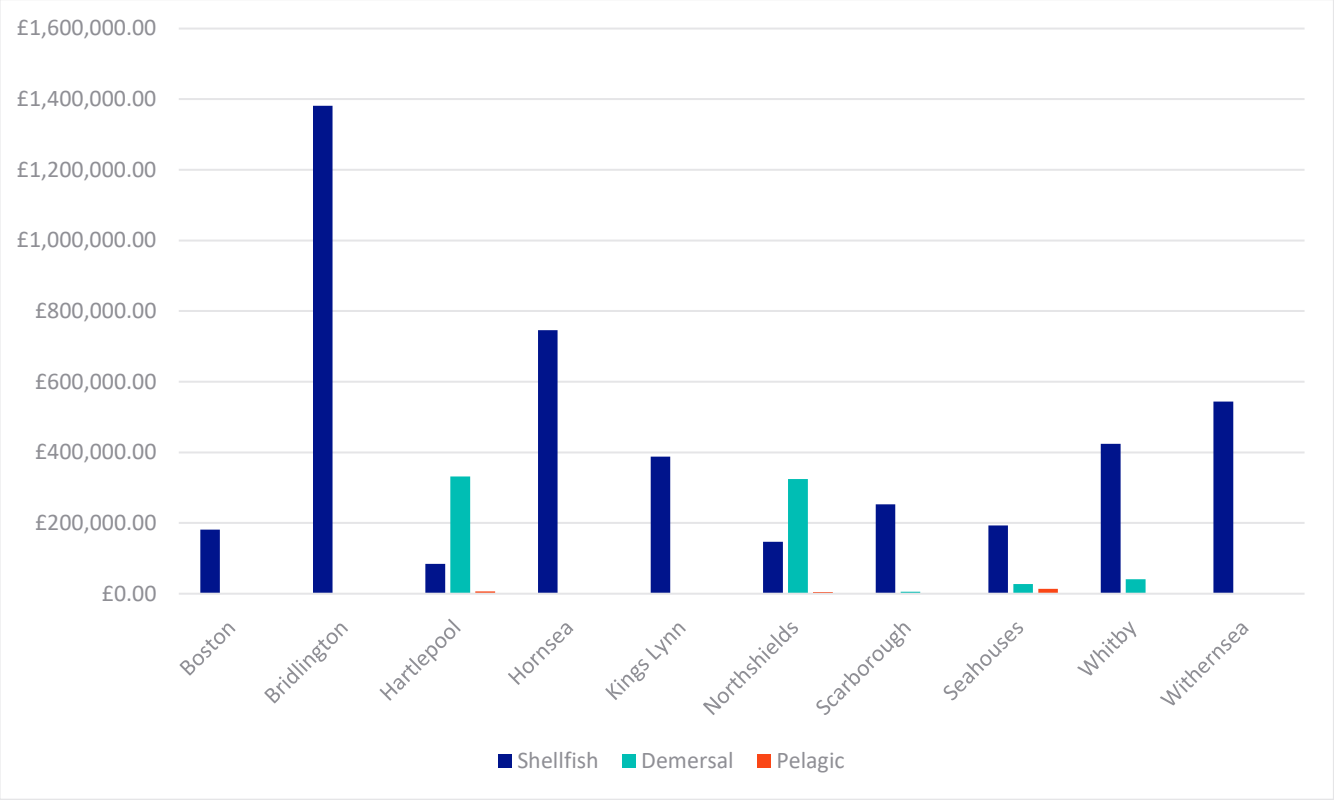
Source: SeaFish (2017, REF 24.7)

Table 24-7 - Registered vessels in ports in proximity to the study area as of September 2024

Port	No. under 10 m vessels (Ref 24.20)	No. vessels with Shellfish License	No. over 10 m vessels (Ref 24.21)	No. vessels with Shellfish License	No. vessels with Scallop License
Amble	17	15	4	2	
Beadnell	4	4			
Berwick	2	2			
Blyth	19	17	8	6	
Bridlington	22	22	25	24	1
Craster	1	1			
Flamborough	4	4			
Grimsby	8	7	13	7	
Hartlepool	19	16	3		1
Holy Island	3	3	3	3	
Hornsea	6	6			
Hull			8	8	
North Shields	22	15	26	5	1
Redcar	30	30			
Scarborough	24	24	4	3	1
Seaham	1	1	1	1	
Seahouses	8	8	3	3	
South Shields	2	2			
Staithes	5	5			
Sunderland	8	8	1	1	
Whitby	29	29	6	3	
Withernsea	6	5			

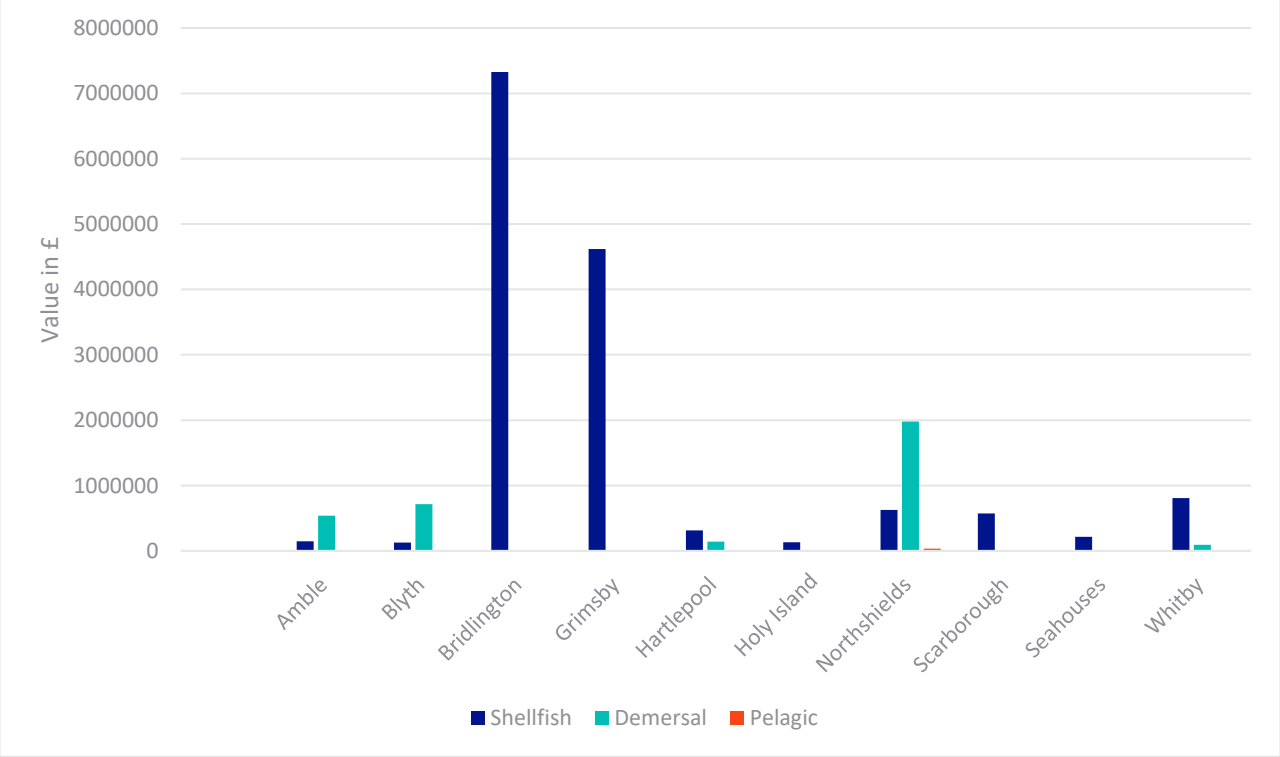
24.5.7 **Plate 24-2** and **Plate 24-3** show the top 10 ports within the study area with catch values for vessels under 10 m and over 10 m in length respectively. It should be noted that some of the catch from the nine rectangles are landed in ports not within the study area such as Peterhead and Eyemouth in Scotland and Ijmuiden and Vlissingen in the Netherlands.

Plate 24-2: Top 10 landing ports within the study area for vessels under 10 m in 2023 by catch value



Source MMO (2024, REF 24.12)

Plate 24-3: Top 10 landing ports within the study area for vessels over 10 m in 2023 by catch value



Source MMO (2024, REF 24.12)

Restricted fishing areas

24.5.8 The English Offshore Scheme intersects or is within proximity of areas which have fishing restrictions. These are either put in place by the regional IFCA or by the MMO. **Volume 3, Part 3, Figure 24-4: Restricted fishing areas within proximity of the English Landfall** illustrates the areas in which fishing is restricted. Further information on these areas are set out below in **Sections 24.5.9** to **24.5.15**.

EIFCA Byelaw areas

24.5.9 Byelaw 3 - Molluscan Shellfish methods of Fishing which requires Fishers to request authorisation for a license to fish shellfish in these areas (EIFCA, 2023, REF 24.22).

24.5.10 Byelaw XXIV: Humber Estuary Cockles Fishery - provisions of this Byelaw state no person shall take, remove or disturb any cockle unless that person holds a current permit issued by the Committee (EIFCA, 2023a, REF 24.23).

24.5.11 Whelk Permit Byelaw 2016 - The byelaw requires whelk fishers to have a permit to fish for whelks and to fish in accordance with flexible permit conditions. Whelk permits are issued annually and expire on the 31st of March each year, regardless of when fishers applied or received a permit (EIFCA, 2023b, REF 24.24).

North Eastern IFCA (NEIFCA) Byelaw areas

24.5.12 Seine Net, Draw Net or 'Snurrevaad': Prohibition of. Byelaw IV - No person shall use in fishing for sea fish any seine net or any draw net of the kind known as the Danish seine or 'Snurrevaad'. (NEIFCA, 2023, REF 24.25)

24.5.13 Permit to Fish for Lobster, Crab, Velvet Crab and Whelk Byelaw XXII - No person shall fish for or take any of the following specified kinds of sea fish: Lobster (*Homarus gammarus*), Crab (*Cancer pagurus*), Velvet Crab (*Necora puber*), or Whelk (*Buccinum undatum)*, within the area of the North Eastern Sea Fisheries Committee District except under a specified permit issued by the Committee (NEIFCA, 2023a, REF 24.26).

MMO

24.5.14 Inner Dowsing Race Bank and North Ridge SAC 2022 - Towing, this prohibits the use of bottom towed fishing gear within a specified reef or sandbank area (gov.uk, 2022, REF 24.27).

24.5.15 Farne Deeps Fishing Restrictions – Which says vessels deploying demersal trawls and seines (with the exception of beam trawls) are prohibited from fishing in the Farne Deeps. Mesh restrictions apply (Gov.uk, 2023, REF 24.28).

Local fishing methods

24.5.16 According to the MMO (2024, REF 24.29), there are many different fishing methods used with the study area, including:

- Beam trawling
- Demersal trawling
- Seine nets
- Pelagic trawl
- Netting
- Longlining
- Handlines
- Pots and traps
- Scallop dredging
- Hydraulic suction dredging

24.5.17 Further information on these fishing methods can be found in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information**.

Fishing intensity

24.5.18 To give a visual representation of the fishing intensity across the English Offshore Scheme, heat maps showing the main fishing methods of beam trawl, bottom otter trawl (demersal trawl), demersal seine, dredges, pelagic trawls and seine, and static gear have been produced. This are based on data from EMODNet of fishing effort between 2018 and 2021. The fishing effort is measured in average megawatt hours (MW).

24.5.19 **Volume 3, Part 3, Figure 24-5: Beam trawling and bottom otter trawl effort within the Study Area** shows the fishing effort for the use of beam trawl and bottom otter trawl gear. The intensity for beam trawl within the English Offshore Scheme is fairly low; the rectangles with greatest intensity are 35F0 which is the ICES rectangle closest to the landfall and 37F0 which is off the Yorkshire coast closest to the ports of Bridlington and Whitby where MW Fishing average fishing hours is between 0.6 and 2.4. The use of bottom otter trawl is higher than the use of beam trawling and can be seen through the whole English Offshore Scheme, with the highest level of activity occurring in 37F0, which is off the Yorkshire coast and 40E9, which is offshore from the Northumberland coast of between 1 and 170 hours average.

24.5.20 **Volume 3, Part 3, Figure 24-6: Bottom seines and dredging effort within the Study Area** shows the fishing effort for the use of demersal seine and dredging gear. The highest intensity for the use of demersal seine gear is in ICES rectangle 37F0, which is off the Yorkshire coast, where the average fishing hours is between 1 and 8 hours, however there is little evidence of the use of this gear type along the English Offshore Scheme. The use of dredging gear is fairly limited within the English Offshore Scheme with the majority within the 12 NM limit, the average is between 1 and 60 hours.

24.5.21 **Volume 3, Part 3, Figure 24-7: Pelagic trawl and seine and static gear effort within the Study Area** shows the fishing effort for the use of pelagic trawl and seine and static gear. The highest intensity for the use of pelagic trawl and seine gear is in 37F0, which is off the Yorkshire coast, and 40E9, which is offshore from the Northumberland coast, where the average fishing hours is between 1 and 94 hours. The use of static gear is evident in rectangles in most of the ICES rectangles across the English Offshore Scheme with the greatest intensity in 36F0, which is off the north Lincolnshire and South Yorkshire coast. and 37F0, which is off the Yorkshire coast, with average fishing hours between 1 and 7.

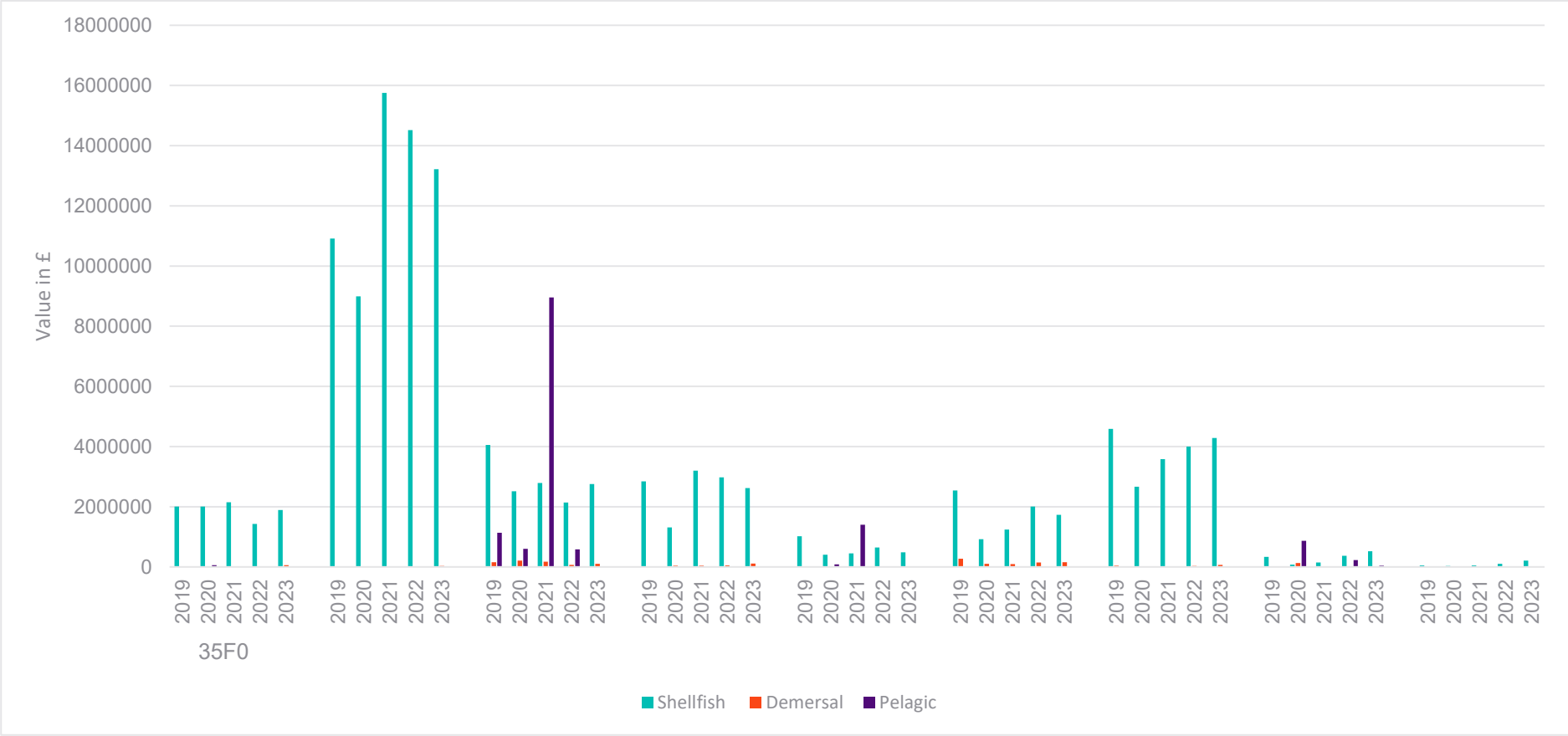
Overview of landings within the study area

24.5.22 The annual value of landings for the period of 2019 to 2023 by species group from the nine ICES rectangles within the study area is illustrated in **Plate 24-4**

24.5.23 This graph clearly shows that the shellfish catch is the highest value species caught within the nine rectangles within the study area with only a few exceptions where the pelagic catch is of higher value. It also illustrates that 36F0 has the highest catch value, which correlates with the figures in **Table 24-7** which shows the catch value for each of the rectangles by vessel size.

The following section looks at the key species caught per rectangle by catch value and weight and the fishing gear used over a five-year period. By looking at this data it is possible to see how the catch varies year by year.

Plate 24-4: Value of landings 2019 to 2023 from the study area by ICES rectangle and species group



Source MMO (2024, REF 24.12)

35F0

24.5.24 ICES rectangle 35F0 is the rectangle closest to the Anderby Creek Landfall, it has the highest overall catch weight for the under 10 m vessels compared to the rest of the submarine cable route. It is primarily fished by the UK inshore fleet, which is illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023**.

24.5.25 It is the second most valued rectangle for the under 10 m vessels due to the high quantity of shellfish caught in this area, with six of the top ten species being shellfish as shown in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-13.**

24.5.26 **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Table 1-1** identifies that this is the only rectangle where 'other mobile gear' is used, in this case the use of hydraulic suction dredgers which are used to catch cockles. The cockle catch in 35F0 is the highest value and highest catch weight species caught. Cockles are targeted between July and December.

24.5.27 Other shellfish species such as crabs, lobsters and whelks are caught using pots or traps which are caught all year round.

36F0

24.5.28 Rectangle 36F0 has the highest catch value across the study area, with a value of over £52 million over the last five years which is twice as much as any other rectangle. In 2023, 99.7%, over £13 million, of the catch value was from shellfish which illustrates how important the shellfish industry is in this area. The bulk of this total is from crab and lobsters as illustrated in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-15**.

24.5.29 The majority of vessels that fish within this rectangle are over 10 m, though it is also fished by the smaller UK inshore fleet. As well as the UK over 10 m fleet there is evidence of German and French trawling vessels, which is illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023**.

24.5.30 The most used fishing gear type in 36F0 is pots and traps, with the second most popular gear type used being dredging primarily to target scallops. The MMO catch statistics show very little use of demersal trawling between 2019 and 2023 though there has been some use of demersal seine gear. This is shown in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Table 1-2Error! Reference source not found.** and **Volume 3, Part 3, Figure 24-3: Surveillance sightings by vessel gear type during 2018 to 2023.**

37F0

24.5.31 The use of pots and traps is prevalent in ICES rectangle 37F0 to target crabs and lobsters. The use of dredging gear is also noted to catch scallops within this rectangle, between 2019 and 2023 the scallop catch was over £3.9 million. The shellfish catch in 2023 accounted for 95.5% of the catch value primarily from crab, lobster and scallops.

24.5.32 However, as can be shown in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-17** and **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-18** there is also

evidence of a high pelagic trawl usage. In 2021 the catch of herring accounted for 74% of the annual catch value. This is good example of the normal annual variation in catch.

24.5.33 It should also be noted that the herring anomaly in 2021 was only from 10 catches in September by vessels over 40 m, with the majority of these vessels coming from Norway rather than the UK fleet (MMO, 2024, REF 24.30). This also illustrates how seasonality and annual variation can affect the catch value.

24.5.34 The majority of the surveillance sightings are of the UK fleet but there is evidence of vessels from Denmark, France, the Netherlands, Portugal, Belgium, Germany and Norway as illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023**.

38E9

24.5.35 As with many of the rectangles along the study area, shellfish catch is the most important and the highest value in terms weight and monetary value. Five of the top 10 species caught by value are shellfish with lobster, scallops and crabs being the most caught species as illustrated in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-19.**

24.5.36 In terms of weight scallops and crabs are the most prevalent as illustrated in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-20.**

24.5.37 Pots and traps are the main gear type used but there is also high-level use of dredging gear to primarily catch scallops as well as demersal trawlers targeting species such as cod, halibut and sole as noted in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Table 1-4.** However, the demersal catch in 2023 only accounted for 4% of the overall catch value of this rectangle.

24.5.38 In terms of vessel nationality, the MMO surveillance sightings only show UK vessels fishing within this rectangle as illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023**.

38F0

24.5.39 Like ICES rectangle 37F0, rectangle 38F0 demonstrates the anomaly of herring catch in 2021. Apart from this anomaly the most valuable catches are still that of shellfish. Five of the top 10 species caught by value are shellfish with lobster, scallops and crabs being the most caught species as illustrated in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-21**.

24.5.40 Pots and traps are the main gear type used but there is also medium-level use of dredging gear to primarily catch scallops as well as demersal trawlers targeting species such as haddock and halibut as noted in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Table 1-5**. There is also some use of pelagic trawl gear for herring and sprats. However, the demersal catch in 2023 only accounted for 1.8% of the overall catch value of this rectangle and pelagic approximately 0.13%.

24.5.41 The MMO surveillance sightings show that this rectangle is fished by vessels from the UK and France as Illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023.**

39E9

24.5.42 38E9 is one of the furthest offshore rectangles along the submarine cable route, and we see a noticeable change in the type of fishing gear used. Although shellfish still account for over 91% of the catch value it is a different species, nephrops also known as the Norwegian lobster which is caught using demersal trawl gear rather than pots and traps as shown in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-23** and **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Table 1-6**.

24.5.43 Pots and traps only account for 6.7% revenue in 2023 with demersal trawling accounting for over 92%.

24.5.44 Over 88% of the landed weight in this rectangle comes from the over 10 m vessels, this may be because it is too far out for the under 10 m vessel fleet who typically fish within the 12 NM boundary. These vessels are primarily from the UK fleet though there is some evidence of Dutch trawling vessels as well as illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023.**

40E8

24.5.45 40E8 is a rectangle closer to the coastline which is heavily fished within the 6 NM limit primarily for shellfish species using pots and traps as the favoured fishing gear method as noted in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Table 1-7.** Six of the top ten species caught by value are shellfish, with lobsters, crabs and nephrops being the most popular as illustrated in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-25**.

24.5.46 Demersal trawling is also at a medium level targeting demersal species such as cod, halibut and whiting, yet in terms of value the demersal catch in 2023 only equated to 1.5% of the annual catch value.

24.5.47 Both the under 10 m and over 10 m vessels use these grounds with a mix of English and Scottish vessels present in the area due to the closeness of the Scottish border. There is little evidence of European vessels working in this area.

40E9

24.5.48 Rectangle 40E9 is around 38 km from the coastline at its nearest point, and there is a noticeable change in the type of fishing gear used within it. Demersal trawling is the most used gear in this area, with some use of pots and traps as shown in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Table 1-8**. The majority of catch is by the over 10 m vessels due to the distance from the shore.

24.5.49 There is a noticeable anomaly on herring catch in 2020 where three catches in September accounted for over £870,000, which was just over 80% of the catch value that year as illustrated in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-27**.

24.5.50 Also, in 2020 there was a very large catch of sandeel with a value of £110,000. This is the only rectangle within the study area that has any evidence of a sandeel catch. Sandeel are now prohibited as a catch species due to their importance as a prey species for other fish, offshore birds and marine mammals. Further information about sandeel can be found in **Volume 1, Part 3, Chapter 20 Fish and Shellfish**.

24.5.51 The MMO surveillance sightings show that this rectangle is fished by vessels from Denmark, the Netherlands and the UK, which is illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023**.

24.5.52 Compared to the rectangles further south along the submarine cable route this has one of the lowest catch values. In 2023 the annual catch value was £584,065 compared to 36F0 whose annual catch value was over £13 million.

41E9

24.5.53 41E9 is the furthest north of the rectangles within the Projects' area and also crosses into the Scottish territorial waters. It is also the furthest rectangle within the submarine cable route from the English or Scottish coast.

24.5.54 Due to its location, it does not have any vessels under 10 m fishing its grounds. It also has the lowest catch value by weight or cash value of any of the rectangles along the submarine cable route with a total value between 2019 and 2023 of just over £480,000 as illustrated in **Volume 2, Part 3, Appendix 3.24.A Supporting Commercial Fisheries Information, Plate 1-29**.

24.5.55 The MMO surveillance sightings only show that vessels for the Danish fleet fish within this rectangle, which is illustrated in **Volume 3, Part 3, Figure 24-2: Surveillance sightings by vessel nationality during 2018 to 2023**.

24.5.56 In terms of the gears used it is primarily pots and traps or demersal trawling with the most targeted species being shellfish, mainly crabs, lobsters and nephrops.

Seasonality

24.5.57 Fishing activities operate all year round but there are some seasons which are more active than others. This variation is down to a number of factors such as weather but also species abundance and availability. **Plate 24-5 to Plate 24-13** show the variation in the species catch over the course of a year and the type of gear types used during the same period.

24.5.58 In order to get a more accurate picture these plates have been split into the species type: demersal, pelagic and shellfish as the shellfish figures are considerably higher than demersal or pelagic catches. It has also been split by rectangle areas along the English Offshore Scheme into the southernmost section 35F0, 36F0 and 37F0, Central section 38F0, 38E9 and 39E9, and the northernmost section 40E8, 40E9 and 41E9.

Southernmost summary

24.5.59 For demersal catch (**Plate 24-4**) the largest catches are in September and October, which over 50 tonnes and 30 tonnes respectively. For the rest of the year the demersal catch is well under 10 tonnes with some months not having any notable catch. The pelagic catch (**Plate 24-6**) peaks in September with over 8 tonnes due to mackerel and horse mackerel. There are only notable catches of pelagic species between August and November. The shellfish catch (**Plate 24-7**) peaks between July and October with catches around 700 tonnes. However, there are catch values for shellfish over 150 tonnes all year round.

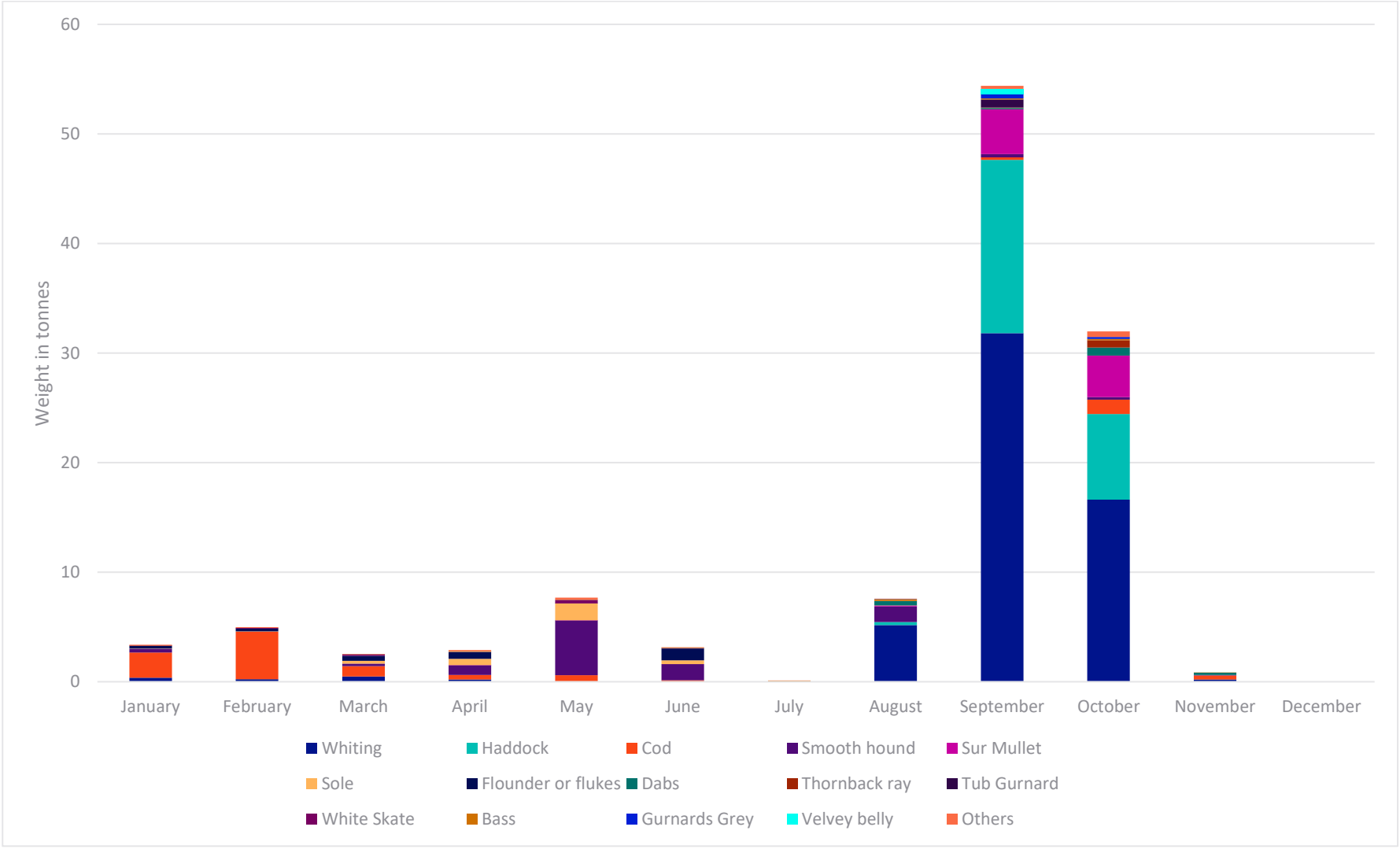
Central section

24.5.60 For demersal catch (**Plate 24-8**) the largest catches are in July and August, with over 26 tonnes and 24 tonnes respectively. For the rest of the year the demersal catch is between 4 and 20 tonnes. The pelagic catch for the central section (**Plate 24-9**) peaked in January in 2023 due to a herring catch, however this was only 1.7 tonnes. There have been notable catches throughout the rest of the year, but these are between 0.05 and 0.6 tonnes. The shellfish catch (**Plate 24-10**) peaked in January with a catch of over 130 tonnes. However, there are catch values for shellfish between 40 and 100 tonnes all year round.

Northernmost section

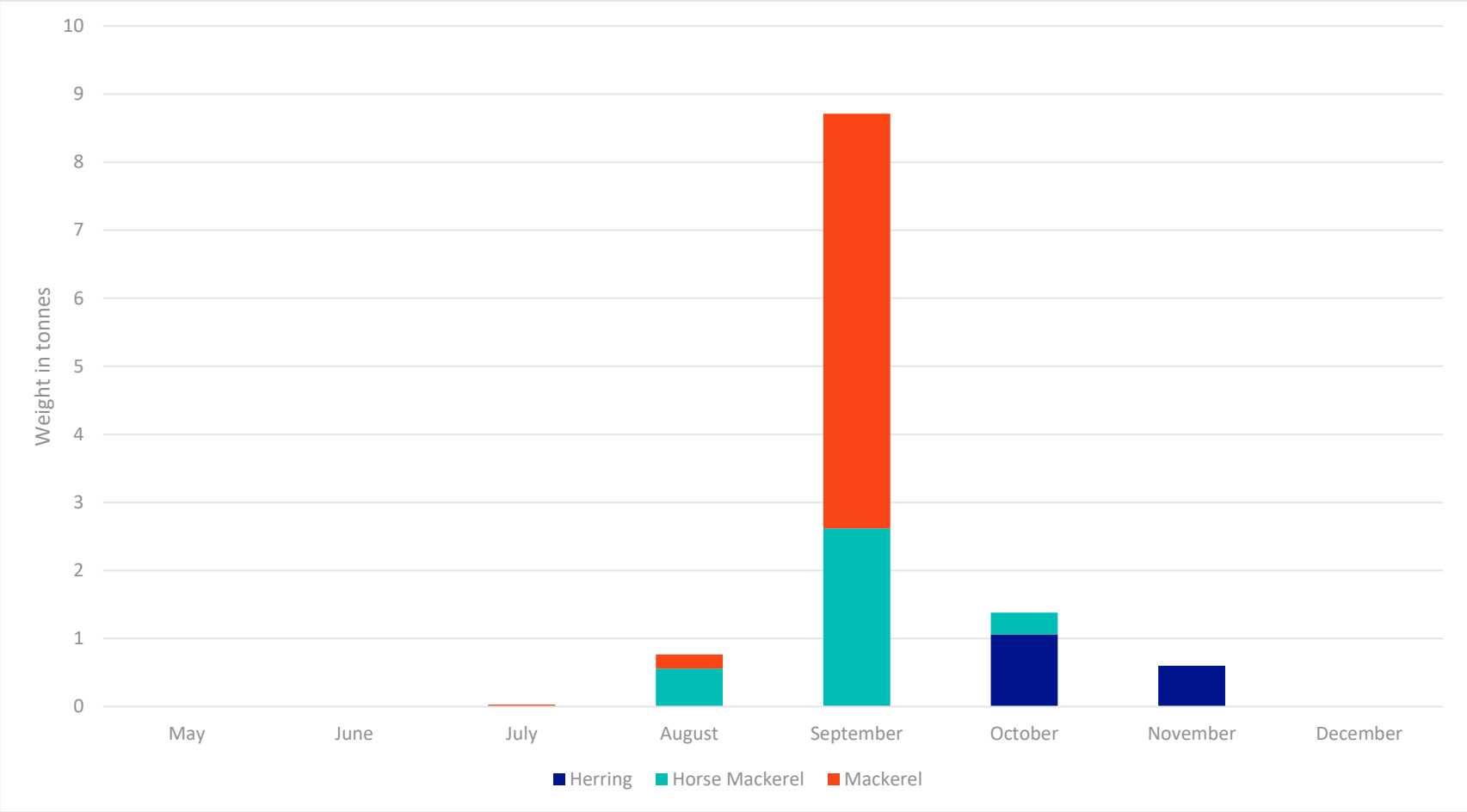
24.5.61 For demersal catch **(Plate 24-11**) the largest in 2023 was in January, which was over 18 tonnes but there were catches in February, November and December which were all over 10 tonnes. For the rest of the year the demersal catch is between 0 and 4 tonnes The pelagic catch for the northernmost section (**Plate 24-12**) peaked in August in 2023 due to a herring catch, which was about 95 tonnes. The only other notable catch was in July which was approximately 1 tonne of mackerel. The shellfish catch (**Plate 24-13)** peaked in July with a catch of over 125 tonnes. However, there are catch values for shellfish between 38 and 105 tonnes all year round.

Plate 24-5: Monthly value by weight of demersal catch by species for ICES rectangles 35F0, 36F0 & 37F0 in 2023



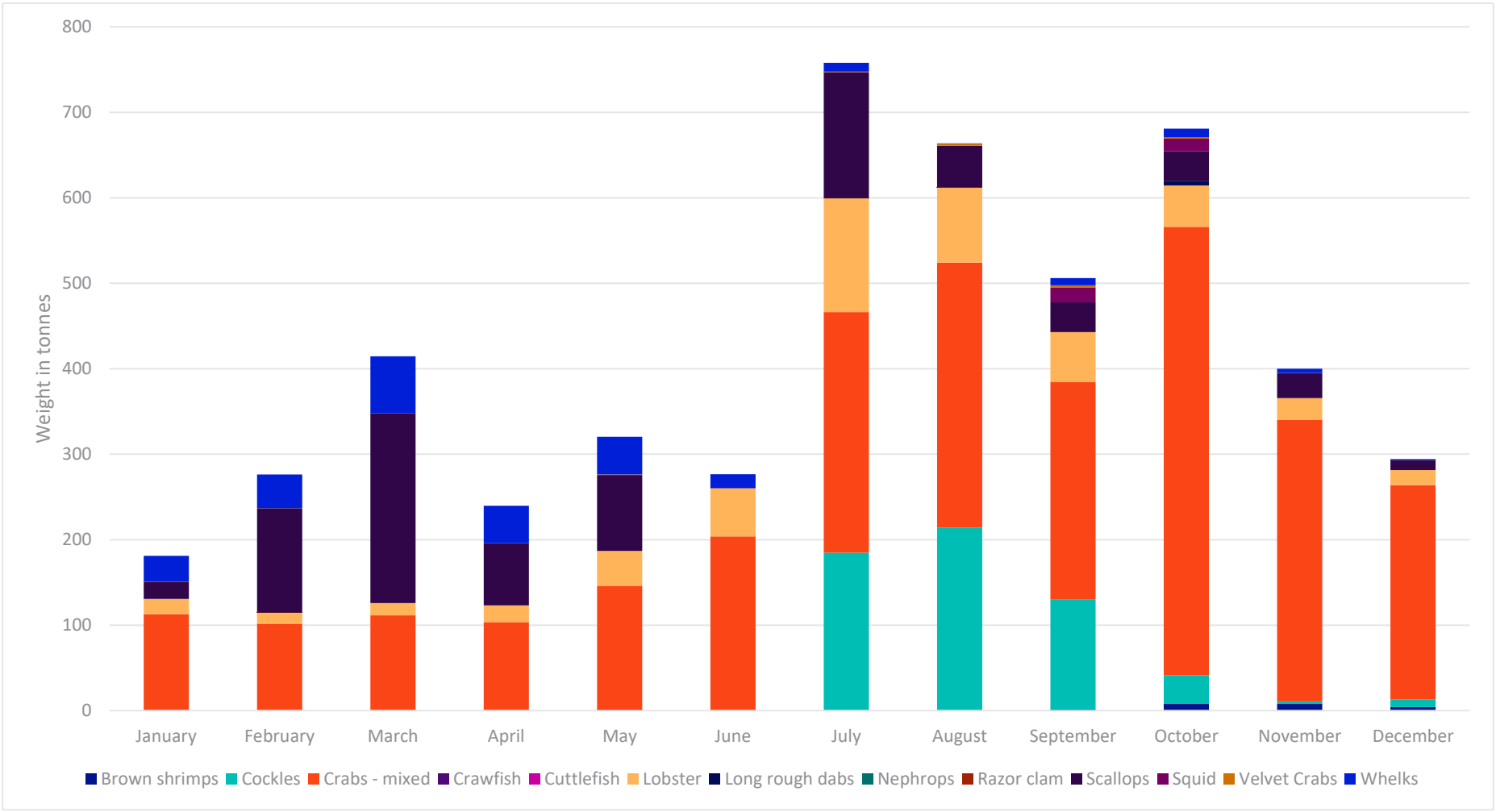
Source MMO (2024, REF 24.12)
*other species include: Plaice, lemon sole, brill, monks & anglers, red gurnards, starry Smoot hound, turbot, four-spotted megrim, ling, red mullet, gurnard and latchet, John dory, wrasses, common skate, mullet – other.

Plate 24-6: Monthly value by weight of pelagic catch by species for ICES rectangles 35F0, 36F0 & 37F0 in 2023



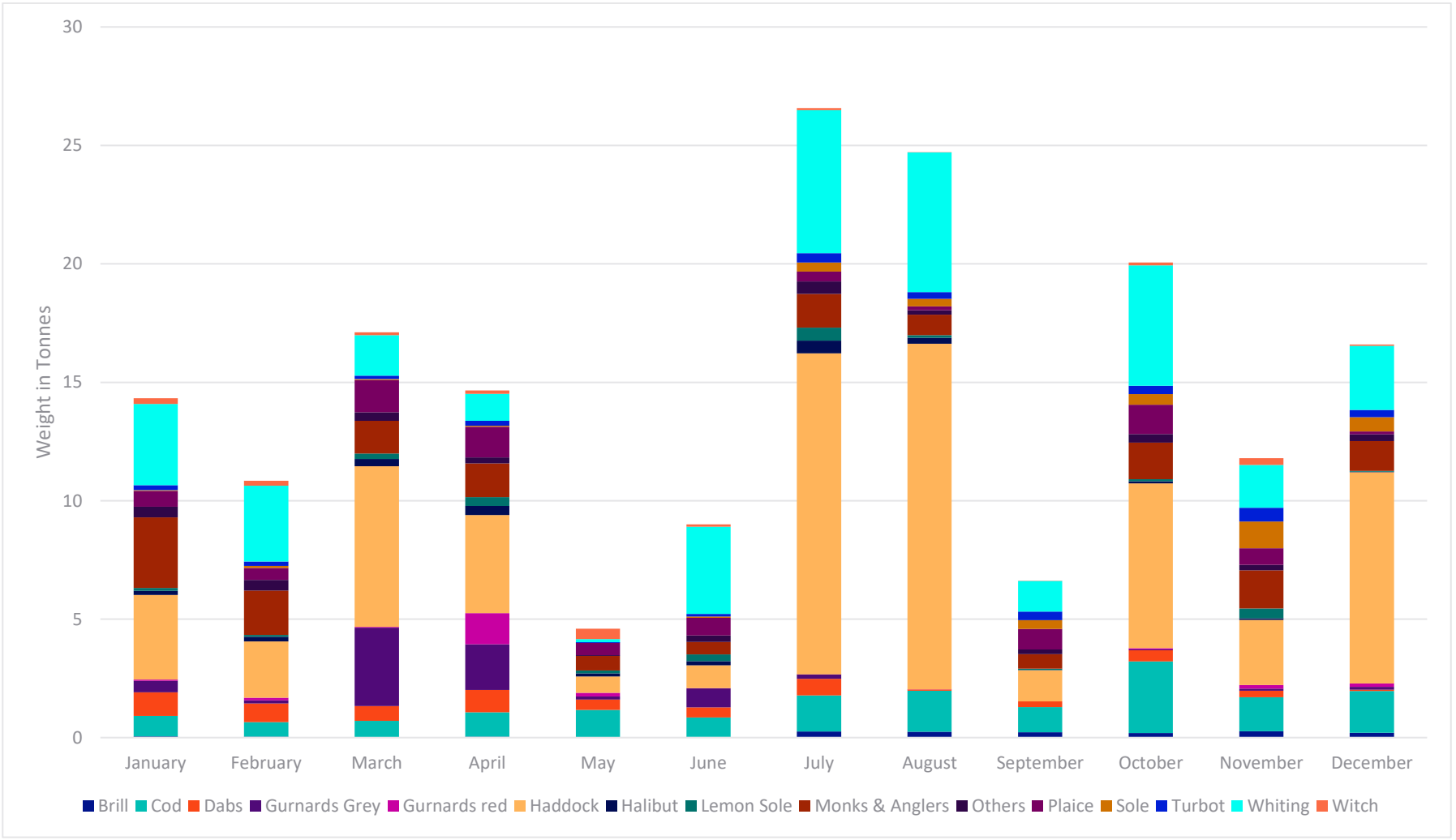
Source MMO (2024, REF 24.12)

Plate 24-7: Monthly value by weight of shellfish catch by species for ICES rectangles 35F0, 36F0 & 37F0 in 2023



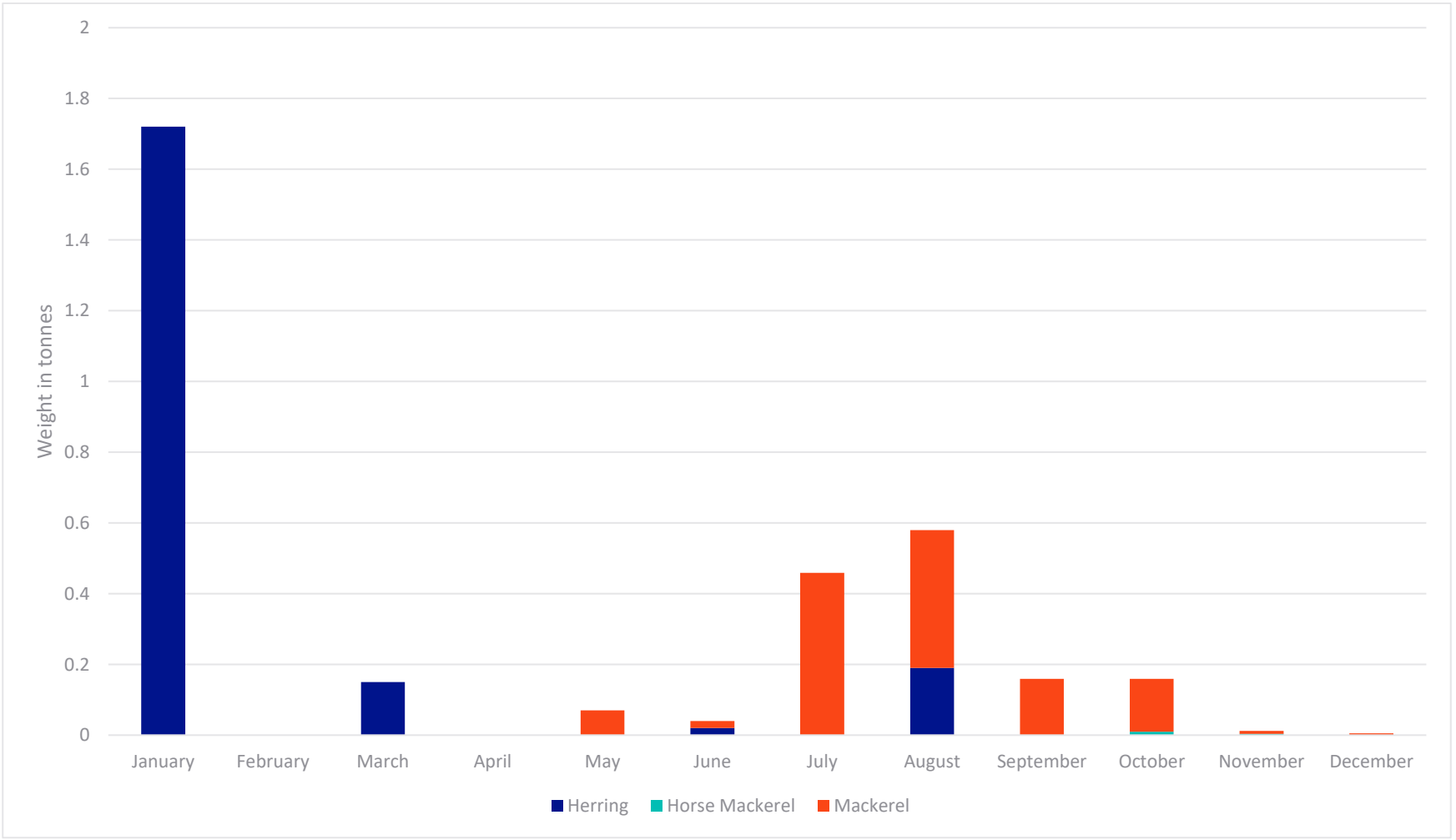
Source MMO (2024, REF 24.12)

Plate 24-8: Monthly value by weight of demersal catch by species for ICES rectangles 38F0, 38E9 and 39E9 in 2023



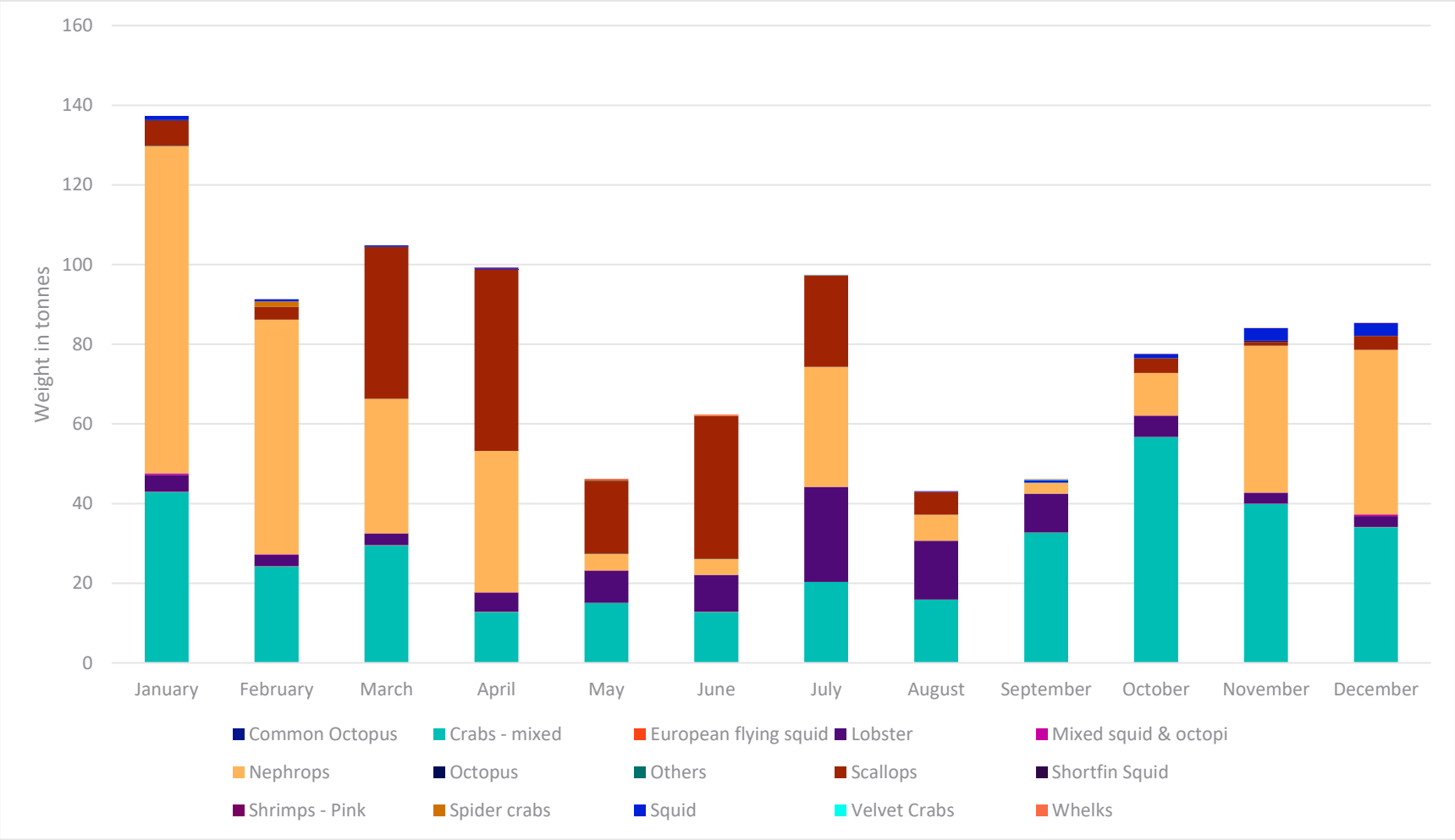
Source MMO (2024, REF 24.12)
*other species include: Thornback ray, Sur Mullet, Gurnard and Latchet, Hake, Skates & rays, Mullet – other, Ling, Redfishes, Tub Gurnard, Spotted Ray, John Dory, Saithe, Blonde Ray, Deep-Water Redfish (Rose Fish), Bass, Catfish, Megrim, Pollack, Red Mullet, Unid DS Squal Sharks & Dogfish, Wrasses, Long rough dabs

Plate 24-9: Monthly value by weight of pelagic catch by species for ICES rectangles 38F0, 38E9 and 39E9 in 2023



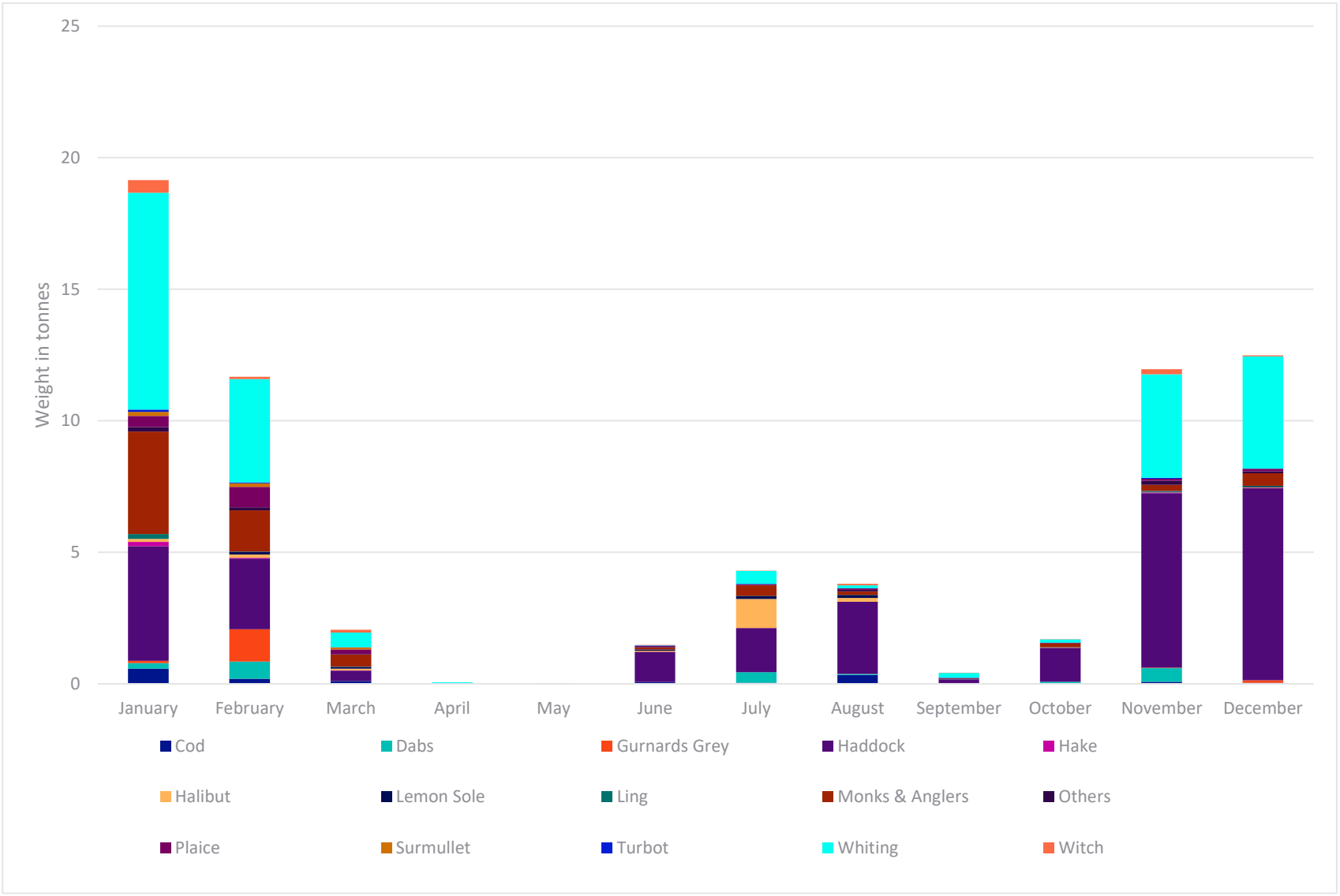
Source MMO (2024, REF 24.12)

Plate 24-10: Monthly value by weight of shellfish catch by species for ICES rectangles 38F0, 38E9 and 39E9 in 2023



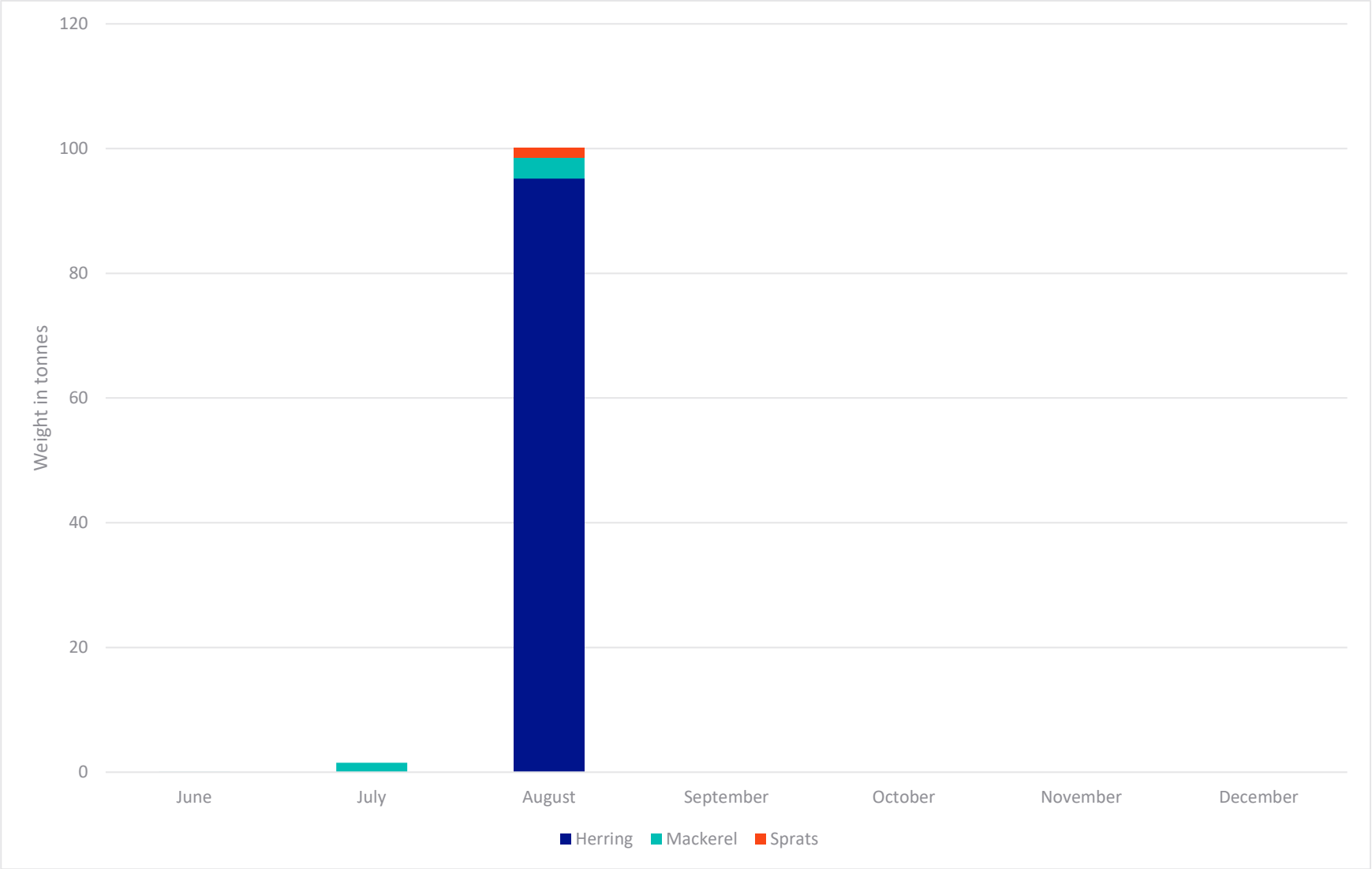
Source MMO (2024, REF 24.12)

Plate 24-11: Monthly value by weight of demersal catch by species for ICES rectangles 40E8, 40E9 and 41E9 in 2023



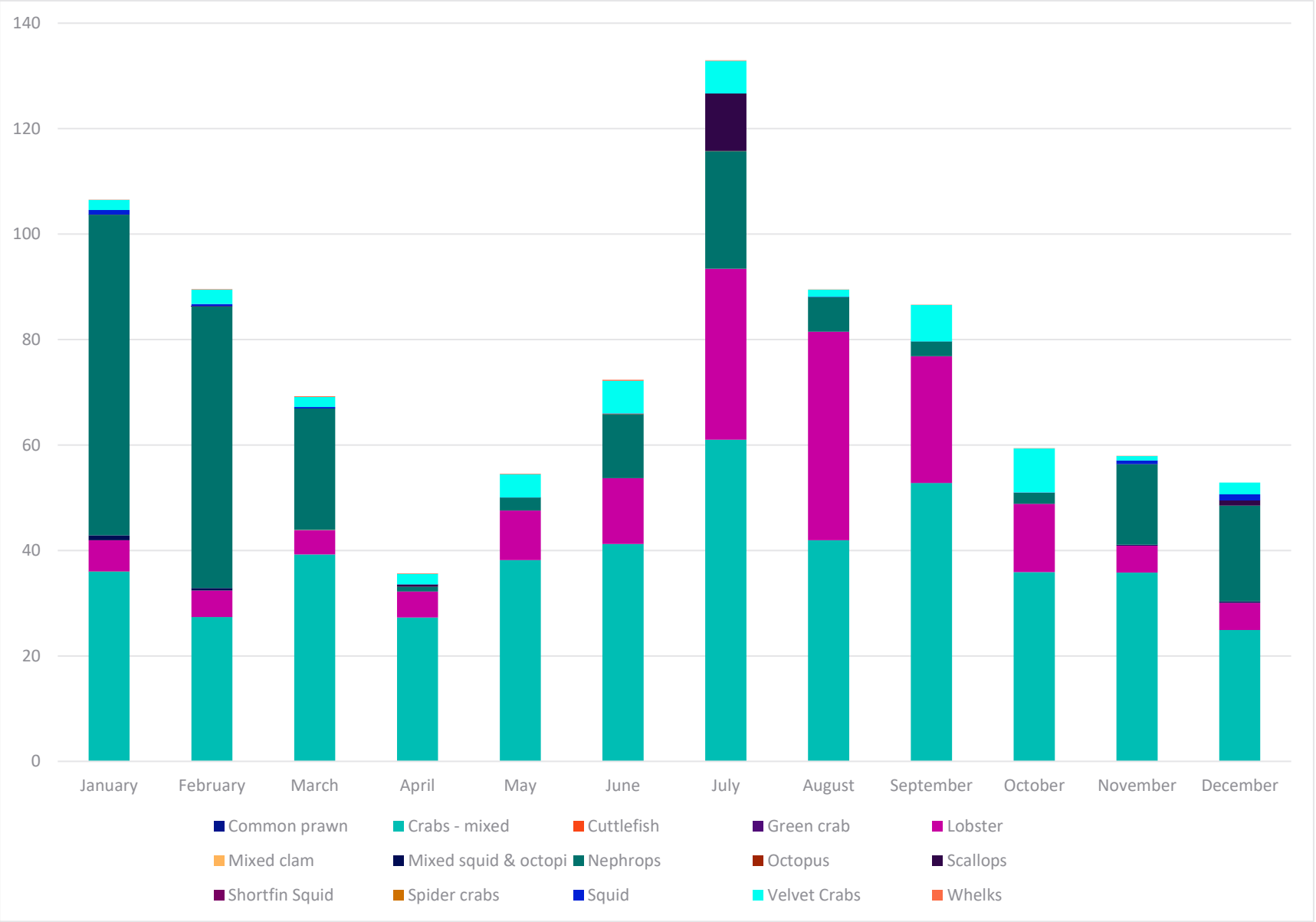
Source MMO (2024, REF 24.12)
Others include: Gurnards red, Sole, Brill, Long rough dabs, Thornback ray, Saithe, Megrim, Redfishes, Mullet – other, John Dory, Bass, Unid DS Squal Sharks & Dogfish, Catfish, Gurnard and Latchet

Plate 24-12: Monthly value by weight of pelagic catch by species for ICES rectangles 40E8, 40E9 and 41E9 in 2023



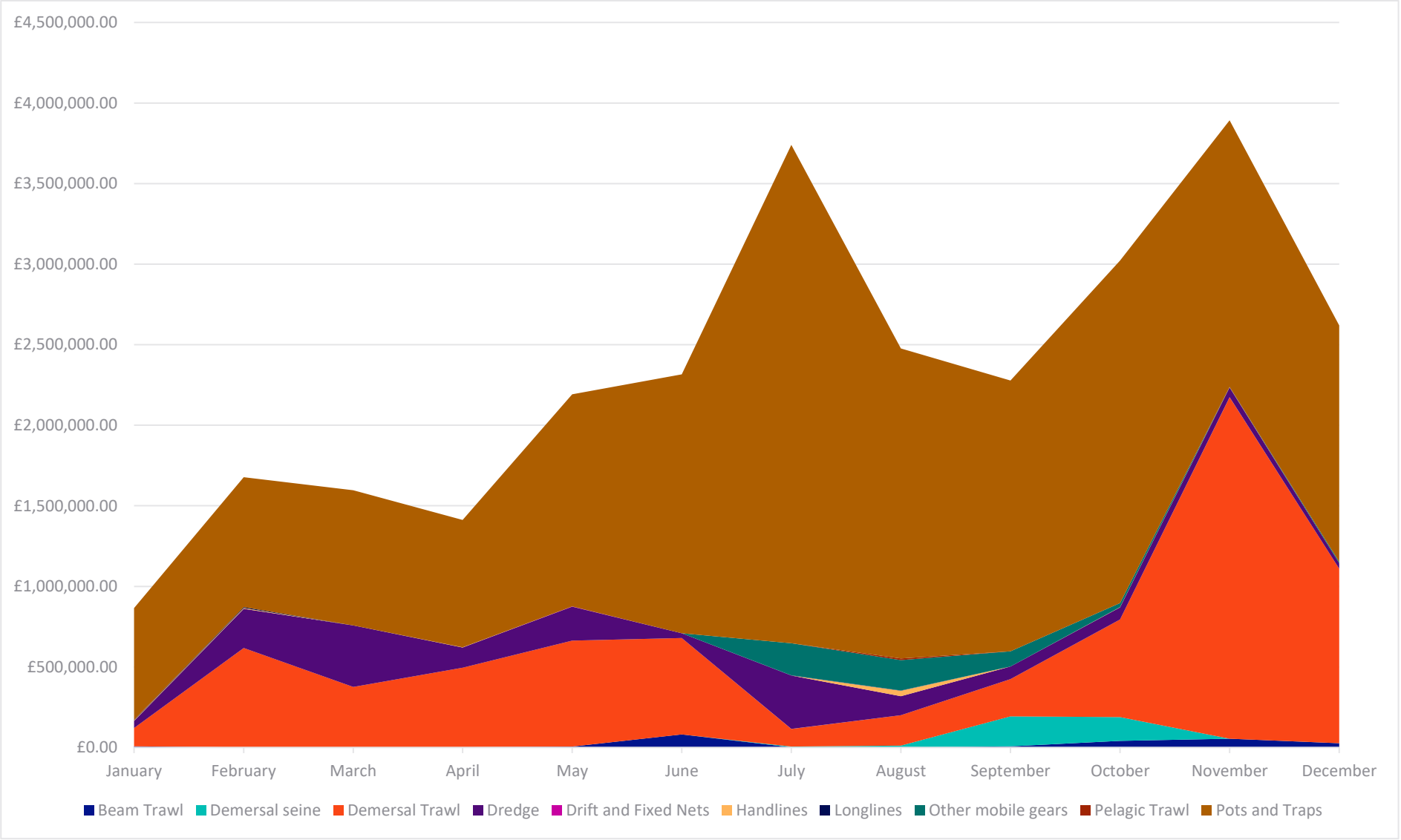
Source MMO (2024, REF 24.12)

Plate 24-13: Monthly value by weight of shellfish catch by species for ICES rectangles 40E8, 40E9 and 41E9 in 2023



Source MMO (2024, REF 24.12)

Plate 24-14: Monthly value of catch by gear type for the English Offshore Scheme in 2023



Source MMO (2024, REF 24.12)

24.5.62 It is clear from **Plate 24-14** that the use of pots and traps is the most valuable in monetary terms followed by demersal trawl, both of which are methods which are used all year round.

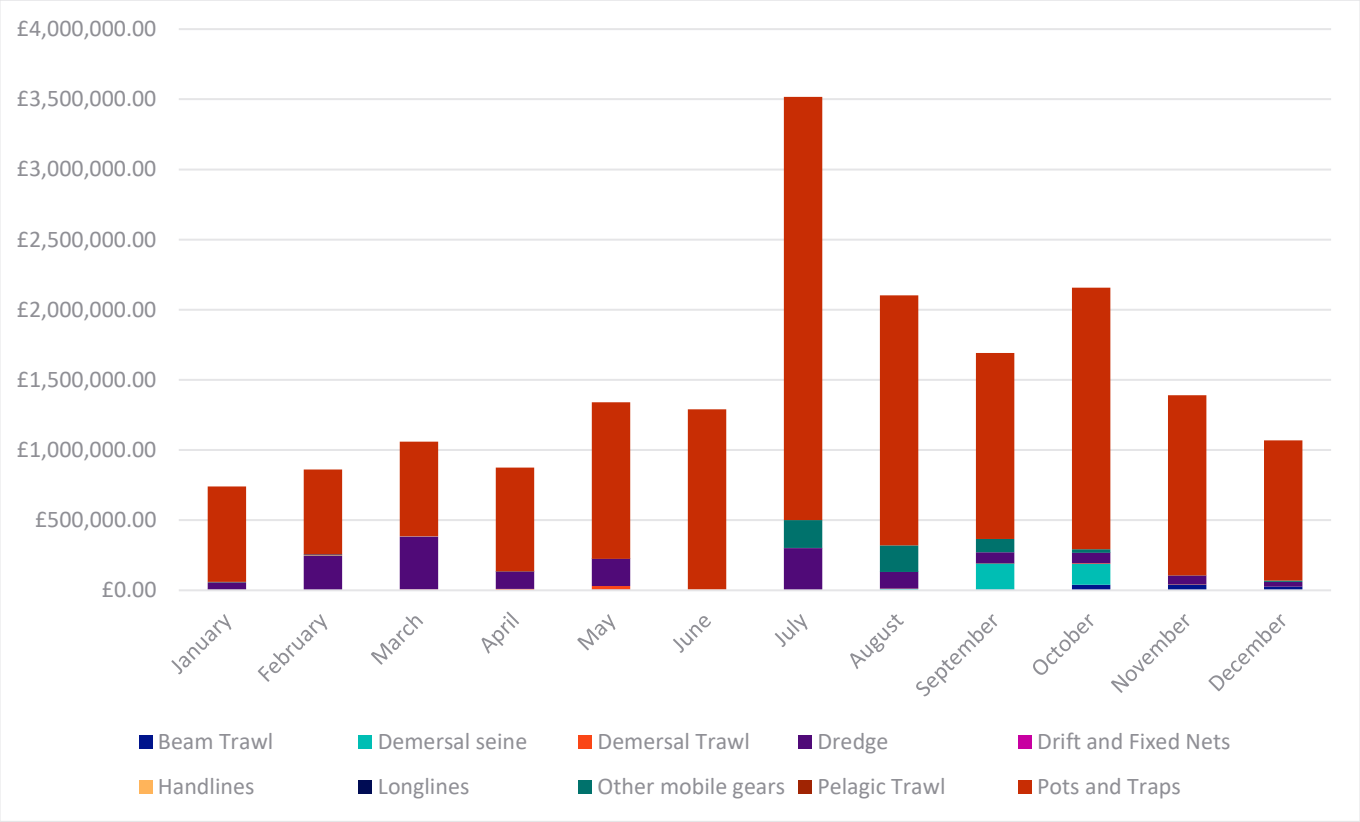
24.5.63 However, as the English Offshore Scheme intersects nine ICES rectangles three seasonality graphs have been produced to show the variation in fishing gear usage across the region. For the southernmost area of the English Offshore Scheme **Plate 24-15**, the central area **Plate 24-16**, and the northernmost area **Plate 24-17**.

24.5.64 **Plate 24-15** illustrates how pots and traps are the highest value gear types used with their best catches between July and October. There is also the use of dredge gear all year round which primarily catches scallops and other mobile gear which is primarily hydraulic suction gear used to catch cockles in 35F0.

24.5.65 Beam trawling is also present in 35F0 between September and June which primarily catches brown shrimp. There is also evidence of the use of handlines and longlines primarily between January and May.

24.5.66 The southernmost area of the English Offshore Scheme equates to over 64% of the annual catch value within the English Offshore Scheme.

Plate 24-15: Monthly value by gear type in 2023 for 35F0, 36F0 and 37F0

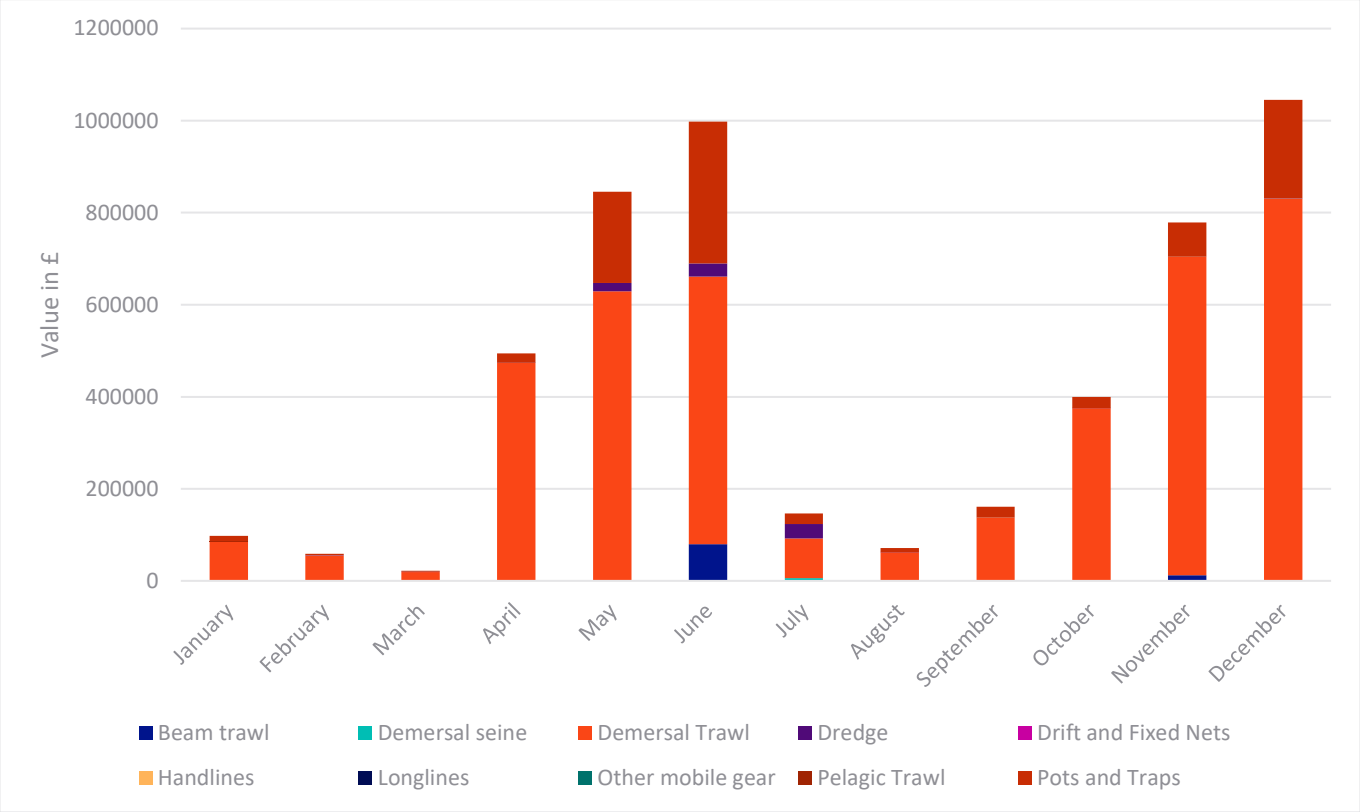


Source MMO (2024, REF 24.12)

24.5.67 **Plate 24-16** shows a different picture on the gear types used in comparison to 35F0, 36F0 and 37F0. Though pots and traps are used all year round it is no longer the most valued gear type; demersal trawl being the most valued gear type. There are high levels of fishing using demersal trawl gear which has its highest catch values between April and June and then again between October and December. There is also notable use of dredging gear catching scallops with peak catches between May and June.

24.5.68 The central area of the English Offshore Scheme equates to under 19% of the annual catch value within the English Offshore Scheme.

Plate 24-16: Monthly value by gear type in 2023 for 38E9, 38F0 and 39E9



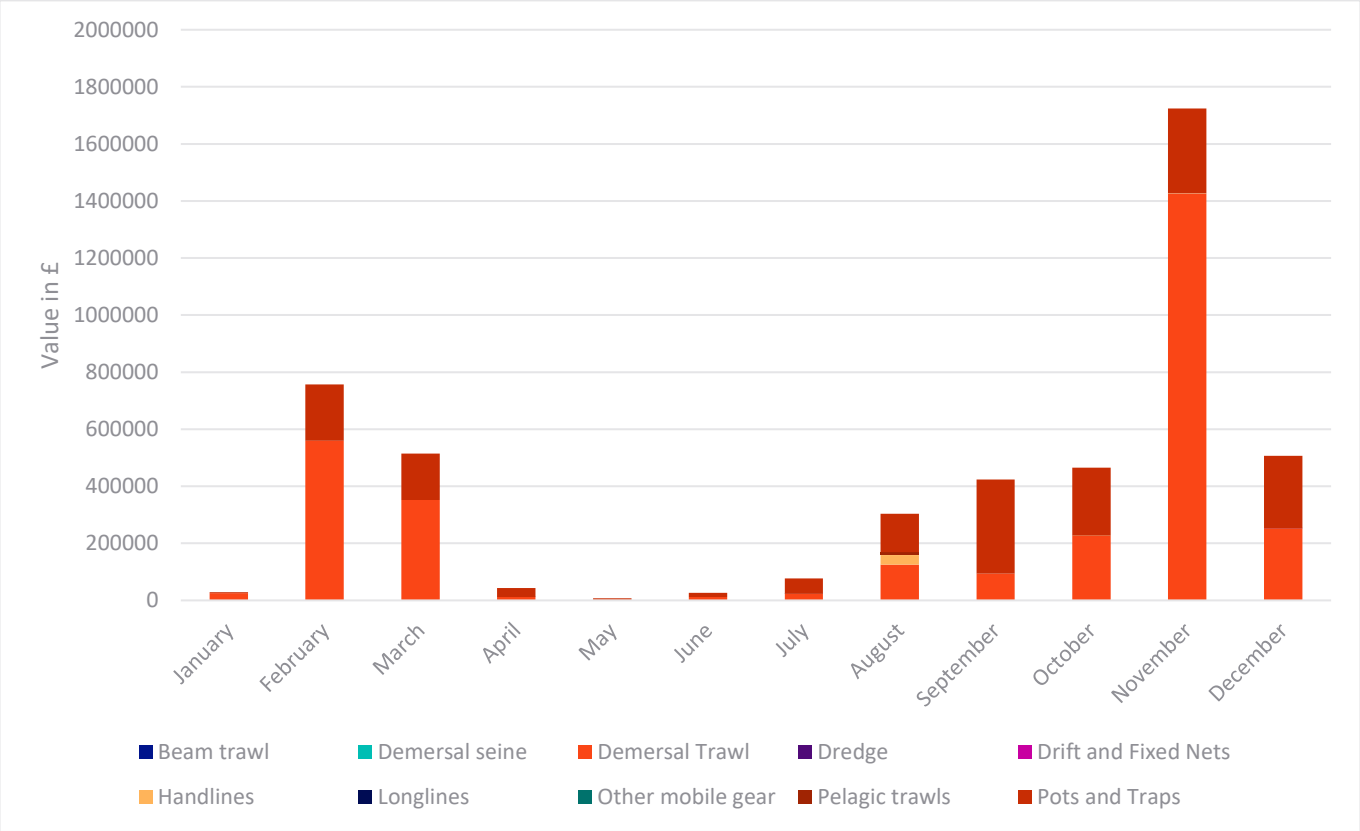
Source MMO (2024, REF 24.12)

24.5.69 **Plate 24-17** illustrates the highest value gear type in this area is demersal trawl which peaks between February and March and again between October and December. There is also the use of pots and traps all year-round peaking between September and December.

24.5.70 This is the only area of the English Offshore Scheme where there is notable pelagic trawling which occurred in August. There is also evidence of some use of handlines peaking in August.

24.5.71 The northern most area of the English Offshore Scheme equates to approximately 17% of the annual catch value within the English Offshore Scheme.

Plate 24-17: Monthly value by gear type for in 2023 40E8, 40E9 and 41E9



Source MMO (2024, REF 24.12)

Future baseline

24.5.1 Commercial fisheries baseline varies season-by-season based on a range of natural and socio-economic factors. The previous section illustrates the amount of variability in the species, catch value and gear type used over a five-year period. Therefore, predicting the future baseline is difficult, but the following factors should be considered:

- Environmental management: Restrictions on the use of certain types of fishing gear or restrictions on species caught within certain areas (such as the Whelks Fisheries Management Plan to ensure the long-term sustainability of whelk stocks by developing a harvest strategy, DEFRA, 2023, REF 24.31).
- Recent fish management plans introduced in December 2024 which introduced new minimum landing sizes for specific species in specific areas. This has been

introduced to protect juveniles being caught before they have matured. (Gov.uk, 2024, REF 24.32)

- Fish stock abundance: Fluctuations of the number of individual species stocks due to recruitment, natural disturbances (such as weather conditions and sea temperature variations).
- Market prices: Commercial fishing fleets respond to the market prices and therefore may change focus on targeting the higher value species when the prices are high (such as whelk whose value has increased over recent years and are primarily exported to non-EU countries; the UK is un-restricted by EU measures on this shellfish since Brexit, Welsh Government, 2020, REF 24.33).
- Fishing gear: As with many industries the commercial fishing industry is trying to be more efficient and sustainable and therefore are using improved gear technology to reduce their operational costs. An example of this is the move away from using beam trawling to using demersal seine gear.
- Fisheries management: each year quotas are set by the government for specific fish species this is to avoid overfishing of specific species and therefore may mean a change in fishing effort in a particular area. Following the withdrawal from the EU, the UK and EU have agreed the Trade and Cooperation Agreement (TCA), which establishes a transitional period from 1 May 2021 until 30 June 2026. During the transitional period, 25% of the EU's fisheries quota in UK waters will be transferred to the UK. Based on these changes it is likely that up to 2026, a similar level of fishing activity will take place within UK territorial waters but this effort will be undertaken by a greater proportion of UK than EU vessels. EU vessels are able to access UK waters by applying for a foreign vessel licence. This licence allows EU vessels to fish within the UK EEZ (12 to 200 NM limit), UK 6 to 12 NM limit (ICES 4c, 7d-g) and Northern Ireland 0-6 NM (DEFRA, 2020, REF 24.34). There are additional restrictions on EU vessels fishing in ICES 38E9, 39E9, 40E8 and 40E9 where there are restrictions on deploying demersal trawls and seine nets (DEFRA, 2025, REF 24.35).
- Climate change: It is anticipated over time that global climate change will result in changes to the marine environment, which would include impacts on fish and shellfish populations of commercial importance (Cheung W et.al., 2012, REF 24.36), (Tripathi, A. et al., 2016, REF 24.37). This may in turn result in changes to commercial fisheries practices in order to respond to any potential changes in species distribution abundance and/or seasonal trends.
- Other offshore developments: The Lincolnshire coast has a number of existing and planned offshore projects including other interconnector projects, and offshore wind developments. All of these projects will have demands on an ever-decreasing area where the local fishers can fish.

24.6 Environmental measures

24.6.1 As set out in **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology**, the environmental measures are characterised as design measures or control and management measures. A range of environmental measures could be implemented as part of the English Offshore Scheme and will be secured in the DCO as relevant. **Table 24-8** outlines how these design and control measures would influence the commercial fisheries assessment.

24.6.2 Several management plans will be provided as Outline Management Plans with the DCO application to support the Deemed Marine Licences. These will include an Outline Construction Fisheries Liaison and Coexistence Plan (FLCP), an Outline Construction Environmental Management Plan (Outline CEMP, **Volume 2, Part 1, Appendix 1.5.C: Outline Construction Environmental Management Plan**) and Outline Marine Pollution Contingency Plan (MPCP). These documents will outline measures to be implemented to comply with legislation (e.g., in relation to the prevention of oil and chemical spills) during all phases of the English Offshore Scheme. These management plans will also include details of notices to be sent to other marine users (including fishers) prior to activities being undertaken. Final management plans will be submitted in accordance with the dMLs to discharge the licence conditions. An Outline CEMP can be found in **Volume 2, Part 1, Appendix 1.5.C: Outline Construction Environmental Management Plan**. In addition, measures identified through the EIA process have been applied to avoid or reduce potential significant effects. Design measures included that are relevant to Commercial Fisheries receptors are included in Table 24-8 below and are also included in **Volume 2, Part 1, Appendix 1.5.A Outline Register of Design Measures**.

Table 24-8 – Summary of the environmental measures

Receptor	Potential changes and effects	Embedded measures
All gear types	General safety	For safety purposes, all vessels would be requested to maintain a minimum distance from construction vessels to prevent interactions.
All gear types	General safety	As built locations of cable and external cable protection would be supplied to UKHO (Admiralty), The Crown Estate and Kingfisher (KIS-ORCA)
Demersal gear	Risk of snagging (as assessed in **Volume 1, Part 3, Chapter 23 Shipping and Navigation**)	Cut cable end locations and associated weights shall be accurately noted and charted and positions given to the FLO at the earliest opportunity for onward communication to the fishing industry
		In the event that cable exposures are identified during routine surveys, the location of these would be shared with fisheries stakeholders and where necessary, additional temporary measures put in place (e.g., marker buoys, use of guard vessels, etc), until a repair or remediation can be implemented.
		Guard vessel(s), using RADAR with Automatic RADAR Plotting Aid (ARPA) to monitor vessel activity and predict possible interactions, would be employed to work alongside the installation vessel(s) during cable installation works and to protect any temporary cable exposures during installation.

Receptor	Potential changes and effects	Embedded measures
All gear types	Risk of snagging / Loss of grounds due to deposit of external cable protection	The intention is to bury the cables in the seabed, except in areas where trenching is not possible e.g. where ground conditions do not allow burial or at infrastructure crossings.
		Cable protection would only be installed where considered necessary for the safe operation of the English Offshore Scheme. This includes the repair of cables due to accidental damage, where depth of lowering is not achieved and at infrastructure crossings.
		Cable protection would be designed to prevent the risk of fishing gear snagging.
		A procedure for the claim of loss of/or damage to fishing gear would be developed and details included in the Outline Construction Fisheries Liaison and Coexistence Plan
All gear types	Temporary restricted access to fishing ground (including required static gear clearance) due to the presence of project vessels and equipment	Designated (and as minimal as possible) anchoring areas and protocols shall be employed during marine operations to minimise physical disturbance of the seabed.
		During the course of cable route clearance, specific activities would be completed to remove items from the seabed. Out of Service cables would be removed as per industry guidelines, larger debris including lost fishing gear would be removed prior to cable installation and a pre-lay grapnel run would be completed to ensure smaller debris is removed. In the event that abandoned, lost or discarded fishing gear (‘ALDFG’) is encountered, it may be necessary in certain circumstances to bring ALDFG onto the vessel deck. In these instances, marked ALDFG would be returned to the MMO/local IFCA for onward retrieval by the owner of the marked gear, in line with existing best practice. Not all gear (particularly ‘active’ gear) is marked; if necessary to bring onto the vessel deck, unmarked gear would be disposed of via conventional onshore waste channels.
		Timely and efficient communication would be given to sea users in the area via Notices to Mariners (NtM), Kingfisher Bulletins, Radio Navigation Warnings Navigational Telex (NAVTEX and Navigational Areas (NAVAREA) warnings and /or broadcast warnings.
		All Project vessels would display appropriate marks and lights and would always broadcast their status on AIS if appropriate.

Receptor	Potential changes and effects	Embedded measures
		A Fisheries Liaison Officer (FLO) and fisheries working group(s) would be maintained throughout installation to ensure project information is effectively disseminated, dialogue is maintained with the commercial fishing industry and access to home ports is maintained during the main fishing season. Details of the FLO will be included in the Construction Fisheries Liaison and Coexistence Plan
		Timings of any temporary areas of exclusion from fishing grounds would be clearly communicated via a notice to mariners.

24.7 Scope of the assessment

Spatial scope and study area

24.7.1 The spatial scope of the assessment of the commercial fish assessment covers the area of the English Offshore Scheme contained within the draft Order Limits, together with the study area as described in **Section 24.4**.

Temporal scope

24.7.2 The temporal scope of the assessment of commercial fisheries is consistent with the period over which the English Offshore Scheme would be carried out and as outlined in **Volume 1, Part 1, Chapter 4: Description of the Projects**. It assumes construction of the English Offshore Scheme would commence at the earliest 2028 and cover a period of 6 years of total construction time. Operation would commence in 2033 with periodical maintenance required during the operational phase of the English Offshore Scheme. It is assumed that maintenance and repair activities could take place at any time during the life span of the English Offshore Scheme.

24.7.3 The English Offshore Scheme is expected to have a life span of more than 40 years. If decommissioning is required at this point in time, then activities and effects associated with the decommissioning phase are expected to be of a similar level to those during the construction phase works, albeit with a lesser duration of two years. Acknowledging the complexities of completing a detailed assessment for decommissioning works up to 40 years in the future, based on the information available, the Projects have concluded that impacts from decommissioning would be no greater than those during the construction phase. Furthermore, should decommissioning take place it is expected that an assessment in accordance with the legislation and guidance at the time of decommissioning would be undertaken.

Identification of receptors

24.7.4 The principal commercial fisheries receptors that have been identified as being potentially subject to significant effects are summarised in **Table 24-9.**

24.7.5 Bottom drift netting was identified as a receptor with the scoping report; it is a gear type which is particularly sensitive to seabed disturbance, as it relies on a seabed that is flat and clear of any obstructions. However, the analysis of baseline data and fisheries

statistics has not identified any areas of bottom drift netting within the study area. Therefore, the gear type has been removed as a receptor from the PEIR. Should any areas be identified during statutory consultation the receptor would be included within the ES.

Table 24-9 – Commercial fisheries receptors subject to potential effects

Receptor	Reason for consideration
Commercial fisheries (Static gear, dredging, demersal seine, demersal trawl, beam trawl, pelagic seine and pelagic trawl)	Commercial fisheries rely on fishing grounds being available to fish, therefore any works within their grounds would cause disruption. The level of disruption would be based on the activities taking place.

Potential effects considered within this assessment

24.7.6 The effects on commercial fisheries receptors which have the potential to be significant and have been taken forward for detailed assessment are summarised in **Table 24-10**.

24.7.7 The following potential impacts although applicable to commercial fisheries have been considered in **Volume 1, Part 3, Chapter 23 Shipping and Navigation**:

- A vessel engaged in fishing activity snags gear on the cable
- Reduction in under-keel clearance
- Interference with Marine Navigational Equipment

24.7.8 Potential impacts on commercial fish species are addressed by the fish and shellfish assessment (**Volume 1, Part 3, Chapter 20 Fish and Shellfish**).

Table 24-10 – Commercial fisheries receptors scoped in for further assessment

Receptor	Likely significant effects
Commercial fisheries (Static gear, dredging, demersal seine, demersal trawl, beam trawl, pelagic seine and pelagic trawl)	Temporary restricted access to fishing grounds during construction, operation and decommissioning phases of the Projects.
Commercial fisheries (Static gear, dredging, demersal seine, demersal trawl, beam trawl, pelagic seine and pelagic trawl)	Temporary displacement of fishing activity into other area during construction, operation and decommissioning phases of the Projects.
Commercial fisheries (Static gear, dredging, demersal seine, demersal trawl, beam trawl, pelagic seine and pelagic trawl)	Temporary increase and deposition of suspended sediments during construction, operation and decommissioning phases of the Projects.

24.7.9 The receptors/effects detailed in **Table 24-10** have been scoped out from being subject to further assessment because the potential effects are not considered likely to be significant.

Table 24-11 – Summary of effects scoped out of the commercial fisheries assessment

Receptors/potential effects	Justification
Loss of fishing grounds due to deposit of external cable protection during the during construction and decommissioning phase of the Projects.	The Planning Inspectorate agreed that the loss of grounds due to the presence of external cable protection during construction and decommissioning could be scoped out.
Changes in distribution of target species during construction, operation and decommissioning phases of the Projects.	This potential impact pathway was included within the scoping report as an impact that would be assessed if the assessment for fish and shellfish identified significant impacts that would affect fish populations. **Volume 1, Part 3, Chapter 20 Fish and Shellfish** has concluded that impacts on fish and shellfish would be Not Significant and therefore this impact has been scoped out of the preliminary assessment.

24.8 Key parameters for assessment

Realistic worst-case design scenario

24.8.1 The assessment has followed the Rochdale Envelope approach as outlined in **Volume 1, Part 1, Chapter 4: Description of the Projects** and **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology.** The assessment of effects has been based on the description of the Projects and parameters outlined in **Volume 1, Part 1, Chapter 4: Description of the Projects**. However, where there is uncertainty regarding a particular design parameter, the realistic worst-case design parameters are provided below with regards to commercial fisheries along with the reasons why these parameters are considered worst-case. The preliminary assessment for commercial fisheries has been undertaken on this basis. Effects of greater adverse significance are not likely to arise should any other development scenario, based on details within the Rochdale Envelope (e.g., different infrastructure layout within the draft Order Limits), to that assessed here be taken forward in the final design plan.

24.8.2 In relation to commercial fisheries the following assumptions presented in **Table 24-12** and **Table 24-13** are made regarding the Projects' design parameters in order to ensure a realistic worst-case assessment has been undertaken.

24.8.3 With regards to underwater noise changes, it is assumed that UXO clearance is undertaken under a separate Marine Licence application, subject to its own environmental assessments. A high-level overview of the underwater noise changes from clearance is provided in the preliminary environmental assessment for fish and shellfish (**Volume 1, Part 3, Chapter 20 Fish and Shellfish)** and will be included in the ES, to provide a holistic overview of everything that may be needed during construction.

Table 24-12 - EGL 3 Project worst-case assumptions

Impact Pathway	Construction	Operation	Decommissioning	Most sensitive location or scenario
Temporary habitat loss/ seabed disturbance	13.20 km^2	To be confirmed	Similar footprint as is disturbed during construction and operation combined.	All gear types
Temporary increase and deposition of suspended sediments	**Volume 1, Part 3, Chapter 18 Coastal and Marine Physical Processes** concluded that the majority of suspended sediment would settle within 700 m of the cable trench, very fine sands (<63 µm) may travel as far as 17.5 km dependant on the peak flow speed. However, sediment deposition beyond 700 m would be <2 mm.			All gear types

Table 24-13 - EGL 4 Project worst-case assumptions

Impact Pathway	Construction	Operation	Decommissioning	Most sensitive location or scenario
Temporary habitat loss/ seabed disturbance	12.75 km^2	To be confirmed	Similar footprint as is disturbed during construction and operation combined.	All gear types
Temporary increase and deposition of suspended sediments	**Volume 1, Part 3, Chapter 18 Coastal and Marine Physical Processes** concluded that the majority of suspended sediment would settle within 700 m of the cable trench, very fine sands (<63 µm) may travel as far as 17.5 km dependant on the peak flow speed. However, sediment deposition beyond 700 m would be <2 mm.			All gear types

Consideration of construction scenarios

24.8.4 As detailed in **Volume 1, Part 1, Chapter 4: Description of the Projects**, the timing of construction activities set out within this PEIR is indicative. To allow for any unexpected circumstances and a realistic worst case assessment, the impact assessment for commercial fisheries considers the following construction scenario to ensure the worst-case scenario for commercial fisheries can be identified and assessed:

- EGL 3 and EGL 4 are constructed sequentially, and construction activities do not overlap temporally. This is equivalent to the 6-year period, mentioned in **Section 24.7.2,** over which commercial fisheries would be subject to effects.
- EGL 3 and EGL 4 are constructed in parallel and construction activities overlap temporally. This would be within the 6-year period, mentioned in **Section 24.7.2,** reducing the time over which commercial fisheries would be subject to effects but potentially increasing the magnitude of impacts.

24.9 Assessment methodology

Overview

24.9.1 The generic project-wide approach to the assessment methodology is set out in **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology,** and specifically in **Sections 5.4** to **5.6**. However, 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 this commercial fisheries assessment. Details are provided below.

Receptor sensitivity/value

24.9.2 The criteria provided in **Table 29-22** has been used to characterise the sensitivity of the receptor and the magnitude of the impact. The sensitivity of the receptor is a function of its capacity to accommodate change and reflects its ability to recover if it is affected. The sensitivity of the receptor is therefore quantified via the following factors:

- Value - A measure of the receptor's importance, rarity and worth.
- Adaptability - The degree to which a receptor can avoid or adapt to an impact.
- Tolerance - The ability of a receptor to accommodate temporary or permanent change without a significant adverse impact.
- Recoverability - The temporal scale over an extent to which a receptor will recover following an impact.

24.9.3 The assessment will use the criteria established in **Table 24-14**. Where receptors are considered to be capable of adapting to, tolerating or recovering from indirect impacts, these factors were incorporated into an assessment of their sensitivity.

24.9.4 The assessment criteria referred to in the Scoping report has been updated to be more relevant to commercial fisheries.

Table 24-14 - Criteria for characterising the sensitivity of receptors

Receptor sensitivity/value	Definition
High	Receptor has low/no capacity to return to pre-impact conditions, e.g., low tolerance to change and low recoverability such as loss of access with no alternatives.
Medium	Receptor is generally vulnerable to the impacts and recoverability is slow or costly e.g., low levels of alternative fishing grounds are available, and/or the fishing fleet has a low operational range.
Low	Receptor has moderate levels of recoverability. May affect behaviour but is not a nuisance to user, with acceptable financial consequences e.g., short-term, reversible changes.
Negligible	The receptor is tolerant to change with no effect on its character. High levels of alternative fishing grounds are available and/or fishing fleet is adaptive.

Magnitude of impact

24.9.5 The magnitude of an impact provides a useful initial measure of the likelihood of an environmental effect arising. Magnitude is defined for the purposes of assessment via four factors:

- Extent - The area over which an impact occurs.
- Duration - The time for which the impact occurs.
- Frequency - How often the impact occurs.
- Severity - The degree of change relative to the baseline level.

24.9.6 The assessment will use the criteria established in **Table 24-15**.

24.9.7 The assessment criteria referred to in the Scoping report has been updated to be more relevant to commercial fisheries.

Table 24-15 - Criteria for characterising the magnitude of an impact

Magnitude	Definition
High	Impact is of long-term duration (15+ years) and/or results in total loss of or major alteration to key elements (e.g., target fish or shellfish biological resource), or features (e.g., location of fishery) of the pre-project conditions, such that the post-project character or composition of the feature would be fundamentally changed. Substantial loss of economic value of commercial landings, that are nationally or regionally significant.
Medium	Impact is of medium duration (7-15 years) and/or results in loss of or alteration to key elements (e.g., target fish or shellfish biological resource), or features (e.g., location of fishery) of the pre-project conditions, such that the post-project character of the feature would be partially changed. Partial loss of economic value of commercial landings that is locally significant.
Low	Impact is of short duration (1-7 years) and/or is a minor alteration to key elements (e.g., target fish or shellfish biological resource), or features (e.g., location of fishery) of the pre-project conditions. Minor loss of economic value of commercial landings that is not locally significant.
Negligible	Impact is temporary (<1 year) and/or is a slight loss of ability to carry out fishing activities or slight loss of target fish or shellfish biological resources. No or unquantifiable change to pre-project conditions. Minimal loss of economic value of commercial landings.

Significance of effect

24.9.8 The significance of an effect, either adverse or beneficial, would be determined using a combination of the magnitude of the impact and the sensitivity of the receptor. A matrix approach is proposed to be used throughout all topic areas to ensure a consistent approach within the assessment. This is described further in **Volume 1, Part 1, Chapter 5: PEIR Approach and Methodology,** and is replicated for ease in **Table 24-16.**

Table 24-16 - Significance matrix

		Sensitivity			
		High	**Medium**	**Low**	**Negligible**
Negative magnitude	**High**	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Minor
	Low	Moderate	Minor	Minor	Negligible
	Negligible	Minor	Minor	Negligible	Negligible
Beneficial magnitude	**Negligible**	Minor	Minor	Negligible	Negligible
	Low	Moderate	Minor	Negligible	Negligible
	Medium	Major	Moderate	Minor	Negligible
	High	Major	Major	Moderate	Minor

Preliminary assessment of cumulative effects

24.9.9 At the current stage of the Projects (PEIR stage), design information for the Projects is insufficient to allow for a robust cumulative assessment to be undertaken. Furthermore, given the current position in relation to baseline data collection, with much of the onshore environmental surveys still to be undertaken during 2025, the baseline identified at this PEIR stage cannot be taken as a complete picture of the potential presence and significance of sensitive receptors. Therefore, a cumulative assessment has not been undertaken at this stage; however, **Volume 1, Part 4, Chapter 28 Cumulative Effects**, presents the long and short lists of 'other developments' which will be considered at the ES stage, and the methodology which allowed for the identification of these other developments, to allow consultation bodies to form a view and provide comment on the other developments included. The long-list will be reviewed and if necessary, updated, in the lead up to the ES, as the Projects design further evolves and in response to any comments raised at statutory consultation.

24.10 Preliminary impact assessment - Temporary restricted access to fishing ground (including required static gear clearance) effects

Construction

24.10.1 It is anticipated that the construction programme for the English Offshore Scheme would be split into four campaigns, one route preparation campaign and three cable lay and burial campaigns for each Project. Pre-construction phase activities, such as surveys, route preparation, boulder clearance, pre-sweeping and infrastructure crossing preparation, are expected to take up to one year to complete. As set out in **Volume 1, Part 1, Chapter 4: Description of the Projects**, installation vessels are estimated to install the cable at a speed of between 100 m and 500 m per hour, depending on seabed conditions and the vessels used.

24.10.2 The HVDC cables would be installed in one trench for each Project, with installation methodologies including simultaneous cable lay and trenching, and surface cable lay followed by post lay trenching. Cable burial tools which may be used include jet trenching machines, mechanical trenchers, control flow excavators and ploughs. Overall, displacement ploughs/boulder clearance ploughs would result in the greatest seabed disturbance, however this method would only be required within discrete sections of the English Offshore Scheme.

24.10.3 Additional information on the construction techniques is provided in **Volume 1, Part 1, Chapter 4: Description of the Projects**

24.10.4 The English Offshore Scheme has the potential to affect all commercial fishing activity (both static and mobile gear) during the construction via temporary restricted access to fishing grounds. During construction, fishing activity would be temporarily excluded from discrete areas of the draft Order Limits due to the recommendation that vessels stay at least 500 m distant from project vessels engaged in works.

24.10.5 There would also be a requirement for fishing vessels that use static gear such as pots to clear their gear from within the draft Order Limits, or a part of it, in advance of any construction activities.

24.10.6 Additionally, during the construction phase fishing vessels may be asked to avoid areas of the draft Order Limits where the installed cables may be temporarily vulnerable for example where cables are surface laid or exposed and are awaiting trenching or protection. If this is required, it would be requested via Notice to Mariners (NtM's) and engagement with fisheries stakeholders via the FLO.

24.10.7 This impact would cause a localised, but temporary, loss of access to fishing grounds and the resources within them. This would therefore result in the loss of fishing activities taking place within these locations which would affect all fishing types/vessels during the periods of construction.

Static gear

24.10.8 This activity would impact on vessels using static gear such as pots and traps, especially within ICES rectangles 36F0 and 40E8 where the shellfish (e.g. crab, lobster and whelk) catch is of the highest value. Though static gear is used along much of the draft Order Limits as illustrated **Volume 3, Part 3, Figure 24-7: Pelagic trawl and seine and static gear effort within the Study Area.**

24.10.9 During construction, fishing vessels using pot or traps would be required to remove pots from areas under construction and either relocate or bring to shore depending on available grounds and fishing preferences. Potting fishers could therefore experience loss of earnings for the time taken to relocate gear (unless they are able to use other grounds and have sufficient prior notice not to set their gear in the construction area), and, potentially, also a loss of earnings associated with not being able to fish the specific grounds under construction. This would be the case if alternative grounds are either not available, or not as productive as the original ones.

24.10.10 Potting, as noted in **Sections 24.5.2– 24.5.3** typically involves a number of fleets of pots being deployed across a range of areas. It is very unlikely that 100% of pots deployed by a single vessel would be impacted at any one time. However, it is understood that specific potting grounds may be targeted by specific fishers and therefore impact magnitude would vary between fishers with some more affected than others. The **magnitude** has been assessed as **Low** because the disruption caused by construction of the Projects is only temporary and would not affect the whole route at any one time.

24.10.11 The fishers who use static gear work in areas which are already heavily exploited, and operate from smaller vessels which are therefore more sensitive to change. Whilst some fishers operate from larger vessels (such as potting vessels 15.01-18 m length), the highest value landings tend to come from those below 15.01 m. Therefore, this receptor has been identified as having a value and **sensitivity** of **Medium** because there are limited areas of alternative fishing grounds that can be used.

24.10.12 The overall significance of the effect on static gear fisheries has been assessed as **Minor** and **Not Significant**.

Dredging

24.10.13 Some dredging occurs in the draft Order Limits as illustrated in **Volume 3, Part 3, Figure 24-6: Bottom seines and dredging effort within the Study Area**, in ICES rectangles 36F0, 37F0 and 38E9, however as this is a mobile gear it is thought that there is unlikely to be any potential significant effect on this type of fishing because the fishing is locationally flexible and they can work around the construction areas (see **Table 24-8**).

24.10.14 The impact on the receptor has been assessed as having a **Low magnitude** with the value and sensitivity of the receptor determined to be **Negligible**. The overall **significance** of the effect on dredging fisheries is **Minor** and **Not Significant**.

Demersal seine, Beam trawling and Demersal trawl

24.10.15 There is evidence of demersal seine gear usage within the draft Order Limits. This is primarily used in ICES rectangles 36F0 and 37F0 as illustrated in **Volume 3, Part 3, Figure 24-6: Bottom seines and dredging effort within the Study Area**.

24.10.16 There is evidence of some beam trawl gear usage within the draft Order Limits. This is primarily used in ICES rectangles 35F0, 36F0 and 37F0 as illustrated in **Volume 3, Part 3, Figure 24-5: Beam trawling and bottom otter trawl effort within the Study Area** , however this is at a much lower scale than some of the other gear types.

24.10.17 The use of demersal gear occurs along much of the draft Order Limits, there are areas of high-density effort specifically in ICES rectangle 38E9, 40E9 and 41E9 as illustrated

in **Volume 3, Part 3, Figure 24-5: Beam trawling and bottom otter trawl effort within the Study Area**.

24.10.18 The UK demersal seine, beam and demersal trawl fleets are highly mobile and can operate across large areas of the North Sea. Given adequate notification via NtM and regular contact with the Projects FLO, it is expected that these vessels would be able to avoid construction areas. The impact on these receptors has been assessed as having a **Low magnitude** because of their mobile nature with the value and **sensitivity** of the receptor determined to be **Negligible** because of their ability to find alternative fishing grounds. The overall **significance** of the effect on demersal seine, beam and demersal trawl is **Minor** and **Not Significant.**

Pelagic trawl and seine

24.10.19 There is evidence of the use of pelagic trawl gear along most of the draft Order Limits with areas of high-density effort in ICES rectangles 37F0 and 40E9 as illustrated in **Volume 3, Part 3, Figure 24-7: Pelagic trawl and seine and static gear effort within the Study Area**, yet this is not reflected in the catch statistics.

24.10.20 As with demersal and beam trawl pelagic trawl vessels are also considered to be highly mobile operating over large areas of the North Sea. Given adequate notification via NtM and regular contact with the Projects FLO, it is expected that these vessels would be able to avoid construction areas.

24.10.21 The impact on this receptor has been assessed as having a **Low magnitude** because of their mobile nature with the value and **sensitivity** of the receptor determined to be **Negligible** because of their ability to find alternative fishing grounds. The overall significance of the effect on demersal seine, beam and demersal trawl is **Negligible** and **Not Significant**.

Operation (Including Maintenance)

24.10.22 The English Offshore Scheme would be designed to minimise any maintenance requirements. Following installation, routine maintenance of the HVDC Submarine Cables is not anticipated. However, the following activities may be required during the operational phase:

- Inspection surveys;
- Cable Repair (if required); and
- Reburial, remedial protection, or maintenance and reinstatement of external cable protection features.

24.10.23 Additional information on the English Offshore Scheme operation and maintenance is provided in **Volume 1, Part 1, Chapter 4: Description of the Projects**

All gear types

24.10.24 During operations and maintenance fishing activity would be temporarily excluded from discrete areas of the draft Order Limits due to the need of implementing safety zones around the cable repair vessels and any support vessels such as guard vessels.

24.10.25 It is unknown how many events would happen during the lifetime of the EGL 3 or EGL 4 Project that would require temporary restricted access to fishing grounds. However,

any repair or maintenance activities would be temporary and localised rather than the entire draft Order Limits.

24.10.26 Notice to mariners would be issued in advance of any maintenance works. Vessels using static gear such as pots may be required to temporarily relocate their gear for the duration of any maintenance works.

24.10.27 The magnitude of the impact is predicted to localised and of a shorter duration than construction and therefore the **magnitude** has been defined as **Low** for static gear and **Negligible** for other fishing methods because the disruption would be temporary and of a short duration.

24.10.28 The vessels that use static gear would be the most sensitive to this impact as they would be required to move their gear. However, any restrictions would be highly localised and therefore should only impact a small number of vessels. Therefore, this receptor has been identified as having a value and **sensitivity** as **Low.**

24.10.29 The mobile fleet who and can operate across large areas of the North Sea are unlikely to be impacted by operations or maintenance work. Therefore, these receptors have been identified as having a value and sensitivity as **Low** because of their ability to find alternative fishing grounds due to their mobile nature.

24.10.30 The overall **significance** of the impact Temporary restricted access to fishing grounds (including required static gear clearance) during operations and maintenance effect has been assessed as **Minor** and is **Not Significant.**

Decommissioning

24.10.31 The life expectancy of the HVDC Submarine Cables is 40 years, although with repairs, some cable systems last upwards of 60 years.

24.10.32 The environmental impact of decommissioning the English Offshore Scheme would be assessed at the time of decommissioning in line with the legislation at the time. Removal of the cable is a similar process to the installation of the cable but in reverse. The environmental impact can therefore not be fully assessed until the environmental conditions at the time of decommissioning are established.

24.10.33 In any event, it is not anticipated that impacts from decommissioning would present any greater environmental risk than any assessed impacts from the construction phase.

All gear types

24.10.34 The effects on commercial fishing of decommissioning activities would be to be the same or similar to those effects during the construction of the English Offshore Scheme. Therefore, the overall **magnitude** for vessels using static gear of **Low** and other vessels **Low** because the disruption would be temporary and of a short duration and would not affect the whole route at any one time.

24.10.35 As with construction and operations and maintenance vessels using static gear would be impacted more than other vessels using other gear types. Therefore, this receptor has been identified as having a value and **sensitivity** as **Medium** because there are limited areas of alternative fishing grounds that can be used. Due to their mobile nature other vessels are unlikely to be significantly impacted, Therefore, these receptors have been identified as having a value and sensitivity as **Low** because of their ability to find alternative fishing grounds due to their mobile nature.

24.10.36 The overall **significance** of the impact Temporary restricted access to fishing ground (including required static gear clearance) during decommissioning effect has been assessed as **Minor** and is **Not Significant**.

24.11 Preliminary impact assessment - Temporary displacement of fishing activity into other areas

Construction

24.11.1 The English Offshore Scheme has the potential to effect commercial fishing activity (both static and mobile gear) during construction via temporary displacement. This impact would cause a localised, but temporary, loss of access to fishing grounds and with therefore cause temporary displacement of fishers. Exclusion from fishing grounds within the draft Order Limits may lead to temporary increases in fishing effort in other areas which may already be heavily fished. It may also increase the steaming distances of vessels to reach other fishing grounds.

Static Gear

24.11.2 Prior to construction potting vessels would be required to remove pots from the draft Order Limits and either relocate them or bring to shore depending on available grounds and fishing preferences.

24.11.3 Though preference is to relocate to alternative fishing ground this may not be possible as adjacent areas may already be heavily fished by other vessels using static gear which could potentially lead to gear conflict. It could also lead to an increase in steaming distances to other fishing grounds.

24.11.4 There is the potential for conflict over the reduced grounds if displaced vessels using mobile gear explore grounds primarily used by potting vessels. Conflict between mobile and static gear has the potential to occur and therefore impact fishing patterns in the area. It is understood that specific potting grounds may be targeted by specific fishers and therefore impact of displacement would vary between fishers with some more affected than others. The **magnitude** has been assessed as **Low** because the disruption caused by construction of the Projects are only temporary and would not affect the whole draft Order Limits at any one time.

24.11.5 The fishers who use static gear work in areas which are already heavily exploited and in smaller vessels and are therefore more sensitive to change. Therefore, this receptor has been identified as having a value and **sensitivity** of **Medium** because there are limited areas of alternative fishing grounds that can be used.

24.11.6 The overall **significance** of the effect on static gear fisheries has been assessed as **Minor** and **Not Significant**

Dredging

24.11.7 There is some evidence of the use of dredging gear in the draft Order Limits. Given adequate notification via NtM and regular contact with the Projects FLO, it is expected that these vessels would be able to avoid construction areas. As this is a mobile gear it is thought that there is unlikely to be any potential significant effect on this type of fishing because the fishing is locationally flexible, and they can work around the construction areas.

24.11.8 The impact on the receptor has been assessed as having a **Low magnitude** with the value and **sensitivity** of the receptor determined to be **Negligible**. The overall **significance of** the effect on dredging fisheries is **Minor** and **Not Significant**.

Demersal seine

24.11.9 Vessels using demersal seine gear are unlikely to be impacted by displacement as they are a mobile gear type and would be able to find alternate grounds to fish in as the excluded areas would be limited and temporary. Given adequate notification via NtM and regular contact with the Projects FLO, it is expected that these vessels would be able to avoid construction areas. Therefore, it is unlikely there would be any potential significant effect on this gear type during construction.

24.11.10 The impact on the receptor has been assessed as having a **Low magnitude** because of their mobile nature with the value and **sensitivity** of the receptor determined to be **Negligible** because of their ability to find alternative fishing grounds. The overall **significance** of the effect on demersal seine fisheries is **Minor** and **Not Significant**.

Beam trawling and Demersal trawl

24.11.11 Beam and demersal trawlers may be impacted if vessels using static gear methods that have been displaced move to grounds used by the trawlers. This could cause potential conflict of gear. The beam and demersal trawlers tend to be larger than the vessels using static gear and should be able to find alternate grounds, even if they need to steam further to reach them. Beam and demersal trawl fleets are highly mobile and can operate across large areas of the North Sea. Given adequate notification via NtM and regular contact with the Projects FLO, it is expected that these vessels would be able to avoid construction areas. Therefore, it is unlikely there would be any potential significant effect on this gear type during construction.

24.11.12 The impact on the receptor has been assessed as having a **Low magnitude** because of their mobile nature with the value and **sensitivity** of the receptor determined to be **Negligible** because of their ability to find alternative fishing grounds. The overall **significance** of the effect on demersal seine fisheries is **Minor** and **Not Significant**.

Operations (Including Maintenance)

24.11.13 During operations and maintenance if vessels have safety zones established around them this could lead to displacement of fishing activity i.e., fishing vessels would be temporarily excluded from discrete areas of the draft Order Limits.

24.11.14 During operations and maintenance of the English Offshore Scheme there is potential to effect commercial fishing activity (both static and mobile gear) via temporary displacement. This impact would cause a localised, but temporary, loss of access to fishing grounds and with therefore cause temporary displacement of fishers. Exclusion from fishing grounds within the draft Order Limits may lead to temporary increases in fishing effort in other areas which may already be heavily fished and could cause potential conflicts.

All gear types

24.11.15 It is unknown how many events would happen during the lifetime of the Projects that would require temporary restricted access to fishing grounds and therefore temporary displacement. However, any repair or maintenance activities would be temporary and localised rather than the entire draft Order Limits.

24.11.16 NtMs would be issued in advance of any maintenance works. Vessels using static gear such as pots may be required to temporarily relocate their gear for the duration of any maintenance works and therefore be temporarily displaced.

24.11.17 The impact is predicted to be highly localised and of a shorter duration than construction and therefore the **magnitude** has been defined as **Low** for static gear and **Negligible** for other fishing methods because the disruption would be temporary.

24.11.18 The vessels that use static gear would be the most sensitive to this impact as they would be required to move their gear. However, any restrictions would be highly localised and therefore should only impact a small number of vessels. Therefore, this receptor has been identified as having a value and **sensitivity** as **Medium** because there are limited areas of alternative fishing grounds that can be used.

24.11.19 The mobile fleet who and can operate across large areas of the North Sea are unlikely to be impacted by operations or maintenance work. Therefore, these receptors have been identified as having a value and **sensitivity** as **Low** because of their ability to find alternative fishing grounds due to their mobile nature.

24.11.20 The overall **significance** of temporary displacement of fishing activity into other area during operations and maintenance effect has been assessed as **Minor** and **Not Significant**.

Decommissioning

24.11.21 The effects on commercial fishing of decommissioning activities would be the same or similar or less than those effects during the construction of the English Offshore Scheme. Therefore, the overall **magnitude** for vessels using static gear would be **Low** and for other vessels would also be **Low** because the disruption would be temporary and of a short duration.

24.11.22 As with construction and operations and maintenance vessels using static gear would be impacted more than other vessels using other gear types. Therefore, this receptor has been identified as having a value and **sensitivity** as **Medium** because there are limited areas of alternative fishing grounds that can be used.

24.11.23 Due to their mobile nature other vessels are unlikely to be significantly impacted, Therefore, these receptors have been identified as having a value and **sensitivity** as **Low** because of their ability to find alternative fishing grounds due to their mobile nature.

24.11.24 The overall **significance** of temporary displacement of fishing activity into other areas has been assessed as **Minor** and **Not Significant.**

24.12 Preliminary impact assessment - Temporary increase and deposition of suspended sediments

Construction

24.12.1 Temporary increases and depositions of suspended sediments are likely to occur from installation activities during construction such a PLGR, boulder clearance but primarily from pre-sweeping of sand waves and cable trenching. As turbidity may also increase, sediment plumes could then be carried through the water column and deposited on the seabed elsewhere. This assessment also considers the changes in water clarity,

disturbance of contaminated sediments and smothering and siltation rate changes which are all sub-sets of impact pathway.

24.12.2 Depending on the technique used and the size of sand waves requiring pre-sweeping, the redeposition of sediment can cause smothering >10 cm deep over relatively wide areas of seabed (in the order of tens of thousands square metres). For commercial fisheries, this may cause the clogging of static gear and any contents of pots or traps and clogging of fine nets.

24.12.3 The majority of the draft Order Limits is over primarily sand, gravelly sand and slightly gravelly sand sediment type. **Volume 1, Part 3, Chapter 18 Coastal and Marine Physical Processes** provides an assessment of the area of seabed impacted by temporary increases and depositions of suspended sediments. In summary, it estimates that all sediment coarser than fine sand would settle within the draft Order Limits and very coarse gravels would settle back into the trench. Fine particles may form part of a sediment plume which could result in light smothering (<5 cm) within 700 m of the trench. Beyond 700 m, fine particles may travel up to 17.5 km, but sediment deposition would be <2 mm, and unnoticeable against background levels of sediment deposition. The maximum distance the suspended sediment concentrations exceed 10 mg/l is 8 km from the source (but note that this is within nearshore sections of the draft Order Limits, further offshore it reduces to 2.7 km due to the reduced percentage of fines in sediments). As such, any impact from SSC is expected to be small and highly localised, and any measurable change in SSC would be temporary and localised, i.e., mostly within the bottom 5 m of the water column.

Static gear

24.12.4 There is potential for temporary increases and depositions of suspended sediments to affect the use of static gear. Static gear sits on the seabed and therefore could get smothered by depositions of suspended sediments which could clog up the gear and any contents should the gear be within close proximity to the disturbance. However, it is highly unlikely that static gear would be that close to construction activities as they would have been asked in advance to move away from these areas.

24.12.5 The **magnitude** of a temporary increase and deposition of suspended sediments has been assessed as **Negligible**. This receptor has been identified as having a value and **sensitivity** of **Low** commercial fishers using static gear would have been requested to move their gear away from construction areas. The overall **significance** of the effect on cockles has been assessed as **Minor** and **Not Significant**.

Mobile gear types

24.12.6 The effects mobile gear types a from temporary increases and deposition of suspended sediments has assessed the **magnitude** to be **Negligible** because the gear is mobile and unlikely to be in one area long enough to have suspended sediment settle on it. These receptors have been identified as being of the **Low sensitivity**. Therefor the **significance** of the effects has been assessed to be **Negligible** and **Not Significant**.

Operations (Including Maintenance)

All gear types

24.12.7 It is possible that temporary increases and deposition of suspended sediments may be required during operations and maintenance however this would be highly localised.

Therefore, the **magnitude** has been defined as **Low**. The sensitivity of all gear types receptors has been assessed as **Low sensitivity** as Notice to Mariners would be communicated in advance to ask fishers to avoid the area during any operations or maintenance activities. The **significance** of the effect has been assessed as **Minor** and **Not Significant.**

Decommissioning

All gear types

24.12.8 If temporary increases and deposition of suspended sediments occur during decommissioning its impact would be similar to those during construction and therefore overall significance for all gear types is predicted to be **Minor** and **Not Significant**.

24.13 Transboundary Effects

24.13.1 The EIA Regulations require an ES to consider the transboundary effects of a development (paragraph 5 of Schedule 4). Given the nature of the English Onshore Scheme and its proposed location, significant transboundary effects are unlikely as there are no pathways for effects to occur outside of the UK. Similarly, the English Offshore Scheme lies wholly in UK waters. Separate applications would be submitted to the relevant Statutory Authority for the Scottish Schemes. Where the English and Scottish Schemes meet, collaborative environmental assessments would ensure impacts are fully assessed. As outlined in the Planning Inspectorate's Advice Note Twelve (REF 24.38) the screening process for transboundary effects would be carried out by the Planning Inspectorate. Information to inform this screening assessment will be provided as part of the application for the DCO.

24.14 Further work to be undertaken

24.14.1 The information provided in this PEIR is preliminary, the final assessment of potential significant effects will be reported in the ES. This section describes the further work to be undertaken to support the commercial fisheries assessment presented in the ES.

24.14.2 An Outline Construction Fisheries Liaison and Coexistence Plan has been provided with the PEIR. This will outline how the applicant will interact with fishers prior and during any works on the Projects. This will be discussed with fisheries stakeholders and further detail added for the ES.

Baseline

24.14.3 MMO catch data is updated annually (in September) and the intention would be to update the commercial fisheries ES chapter with the most up to date data available. Reference would also be made to the FISMaDiM data source recommended by the NFFO.

24.14.4 With respect to the temporary quay, if the option is taken forward, further information would be gathered in respect to whether commercial fisheries use this area.

24.14.5 Further data for non-UK vessels will also be collected to provide an assessment, although landings from these vessels from the 9 ICES rectangles consistent with the study area are expected to be low.

Assessment

24.14.6 Further assessments may be required if something is picked up during the statutory consultation which had not been previously assessed. If this is the case it would be included within the ES.

24.14.7 Assessment of effects associated with the temporary quay will be provided within the ES should the option be taken forward and if the baseline establishes that commercial fishers operate in the region. Effects to be assessed include disruption or displacement and temporary increase and deposition of suspended sediment. Effects relating to interaction with vessels using the River Nene will be assessed in **Volume 1, Part 3, Chapter 23 Shipping and Navigation.**

Further environmental measures

24.14.8 If it is identified that additional environmental measures are required, these will be discussed and agreed with commercial fisheries stakeholders and detailed as part of the ES. As noted by the Planning Inspectorate in the Scoping Opinion, these could take the form of a seasonal restriction for certain activities within discrete locations within the draft Order Limits. Whilst the preliminary assessment presented above has concluded that impacts on commercial fisheries would be Not Significant, it is recognised that the cumulative effects assessment has not been completed.

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