Spiorad na Mara Offshore Wind Farm

Offshore Project

Environmental Impact Assessment Report

Appendix 21.1: Commercial Fisheries Baseline Characterisation Report, Volume 2c

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1 INTRODUCTION

1.1 OVERVIEW

1.1.1.1 This appendix of the Environmental Impact Assessment Report (EIAR) presents a detailed characterisation of the commercial fisheries in operation across the proposed Spiorad na Mara Offshore Wind Farm (hereafter referred to as 'the Offshore Project') with respect to Commercial Fisheries. This appendix accompanies **Chapter 21: Commercial Fisheries (Volume 2a)** of the EIAR.

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

- **Chapter 20: Other Sea Users, Volume 2a**.

1.1.2 PROJECT BACKGROUND

1.1.2.1 Spiorad na Mara Limited (hereafter referred to as 'the Applicant') is proposing to develop the Project. The Project is an offshore wind farm (OWF) that will consist of up to 60 fixed-bottom wind turbine generators (WTGs).

1.1.2.2 The Project will include both offshore and onshore infrastructure. This Offshore EIAR supports the application for the offshore components of the Project as outlined in **Chapter 1: Introduction, Volume 1a**. The offshore components of the Project (the Offshore Project) includes all infrastructure and activities located seaward of Mean High Water Springs (MHWS) within the Array Area and Offshore Cable Area of Search (OCAS) (**Figure 1.2: Offshore Project Location, Volume 1c**). Further detailed information is provided in **Chapter 3, Volume 1a**.

1.1.2.3 The Offshore Project is situated off the northwest coast of Isle of Lewis/*Eilean Leòdhais* and the Array Area is located approximately 5-13 km offshore and is approximately 161 km^2 in size. It will comprise WTGs, foundations, Offshore Cables, Offshore Substation Platform (OSP) (if required), and Landfall. The Array Area combined with the OCAS is defined as the Offshore Project Boundary. The water depths across the Array Area range from 37 m-67 m with the southwest corner of the Array Area reaching 72 m. The proposed WTGs and fixed foundations will be located within a Turbine Area of approximately 140 km^2, within the Array Area.

1.2 PURPOSE OF THIS APPENDIX

1.2.1.1 The information on Commercial Fisheries activity presented in this report is intended to inform the EIAR by providing a detailed understanding of the Commercial Fisheries baseline with an extended timeline of 13 years (2011 to 2023), against which the potential impacts of the Offshore Project can be assessed.

1.2.1.2 Commercial Fisheries activity described in this appendix is defined as fishing activity legally undertaken where the catch is sold for taxable profit. Aquaculture and charter angling are not included in this appendix, with details and assessment for these sectors provided in **Chapter 20, Volume 2a**.

1.2.1.3 The subject of this appendix is the Offshore Project seaward of Mean High-Water Springs (MHWS).

2 STUDY AREA

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

2.1.1.2 The Offshore Project, including the Array Area and OCAS, is located within ICES rectangle 45E3; which forms the Commercial Fisheries local study area for the purposes of the EIAR (**Plate 2-1**).

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

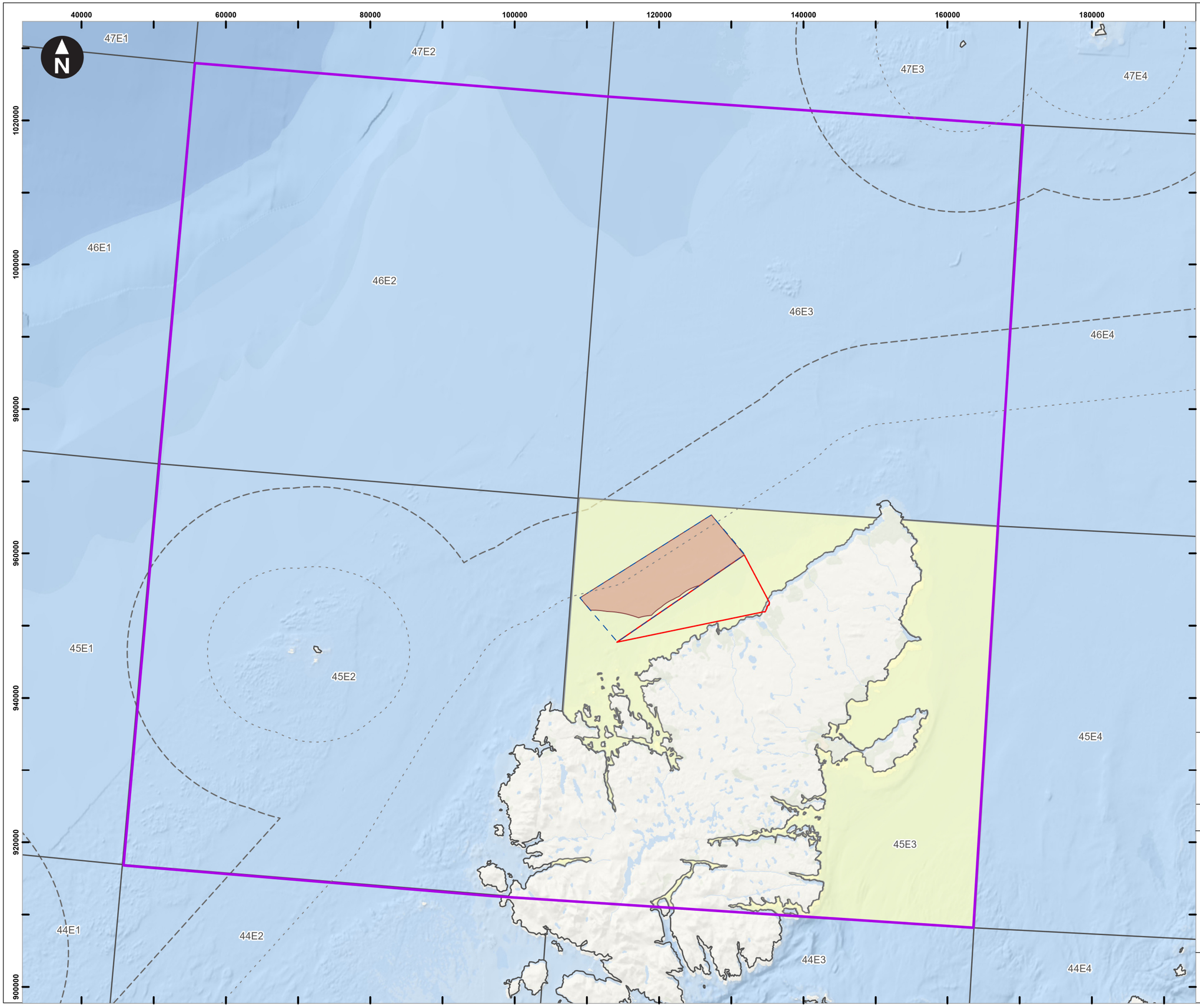
2.1.1.4 To summarise, there are 2 scales of Commercial Fisheries study areas as follows:

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

2.1.1.5 The local and regional study areas extend the Commercial Fisheries study area defined in the Scoping Report by including the additional ICES rectangle 46E2. This was included due to the proximity to the Array Area.

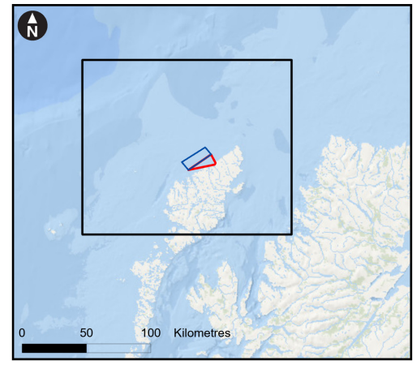
2.1.1.6 The Commercial Fisheries local and regional study areas were presented to fishers and commercial fisheries representative during the first phase of public consultation in September 2024; stakeholders raised no concerns nor suggested modifications to the study areas.

Plate 2-1: Commercial Fisheries study areas



Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- Commercial fisheries regional study area
- Commercial fisheries local study area
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 2.1
Commercial Fisheries Study Areas

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3 METHODOLOGY

3.1 APPROACH

3.1.1.1 This report has been developed through an extensive and thorough analysis of data and literature, sources of which are fully referenced at the end of this document. The assessment encompasses both publicly available data sets and data obtained through specific requests. Landings statistics have been analysed using Microsoft Excel, while Vessel Monitoring System (VMS) data and Automatic Identification System (AIS) data have been evaluated using ArcPro Geographic Information System (GIS) software.

3.1.1.2 In addition to quantitative data, qualitative insights have been gathered through direct consultation with the fishing industry.

3.1.1.3 This analysis has been through a desktop study. While no specific Commercial Fisheries surveys have been undertaken, gear scouting observations have been logged.

3.2 DESKTOP STUDY

3.2.1.1 A detailed desktop review of existing studies and datasets was undertaken to gather information on commercial fisheries within the commercial fisheries local and regional study areas.

3.2.1.2 **Table 3.1** summarises the studies and datasets used.

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

3.2.1.4 Engagement and discussion with the fishing industry organisations has provided vital insight into the location and importance of specific fishing grounds to a range of different fisheries. In particular, a series of plotter data screenshots from different sample of organisations' member fishing vessels has provided clarity on the spatial distribution of fishing grounds within the area, including information obtained by the Fisheries Liaison Officer (FLO).

3.2.1.5 Where data sources allow, a 5 to 13-year trend analysis has been undertaken, using the most recent annual datasets available at the time of writing. The temporal extent of this time period is dependent on each data source analysed, e.g. 2012 to 2016; 2016 to 2020; or 2011 to 2023, as annotated in **Table 3.1**.

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

Table 3.1: Summary of key data sources.

Title	Source	Year	Reference
Landings statistics data for UK-registered vessels, with data query attributes for: landing year; landing month; vessel length category; ICES rectangle; vessel/gear type; port of landing; species; live weight (tonnes); and value (£).	MMO	2011 to 2023	MMO, 2016, 2022a; MMO, 2024a
Landings statistics for EU registered vessels with data query attributes for: landing year; landing quarter; ICES rectangle; vessel length; gear type; species; and, landed weight (tonnes).	EU DCF database	2012 to 2016	EU DCF, 2022
VMS data for UK registered vessels ≥15 m length. Note that UK vessels ≥12 m in length have VMS on board, however, to date, the MMO provide amalgamated VMS datasets for ≥15 m vessels only. VMS data sourced from MMO displays the first sales value (£) of catches.	MMO	2016 to 2020	MMO, 2022b
VMS data for EU registered vessels ≥12 m length. VMS data sourced from ICES displays the surface Swept Area Ratio (SAR) of catches by different gear types and covers EU (including UK) registered vessels 12 m and over in length. Surface SAR indicates the number of times in an annual period that a demersal fishing gear makes contact with (or sweeps) the seabed surface. Surface SAR provides a proxy for fishing intensity.	ICES	2016 to 2020	ICES, 2022
Fishing vessel route density, based on vessel AIS positional data. AIS is required to be fitted on fishing vessels ≥15 m length.	EMSA	2019 to 2022	EMSA, 2023
Surveillance data indicating vessel nationality and gear type for actively fishing vessels.	MMO	2017 to 2022	MMO, 2023b
Scottish fishing vessel VMS data indicating fishing intensity by gear type.	Marine Directorate	2009 to 2013	Marine Directorate, 2024
Scottish Pelagic Fishermen's Association (SPFA) VMS data for Scottish pelagic trawl member vessels 2013 to 2021.	SPFA	2013 to 2021	SPFA, 2024a
SPFA plotter data for Scottish pelagic trawl member vessels indicating location of fishing.	SPFA	Long term data series*	SPFA, 2024b

Title	Source	Year	Reference
Fishing vessel plotter data collated for inshore fishing grounds to provide amalgamated representative mapping of key fishing grounds.	FLO	Long term data series*	FLO, 2025
Scottish Fishermen's Federation (SFF) vessel plotter data indicating location of fishing.	SFF	Long term data series*	SFF, 2024 [Confidential]
Scottish White Fish Producers Association (SWFPA) identified fishing grounds.	SWFPA	Long term data series*	SWFPA, 2024 [Confidential]
*Long term data series is collated across several years (e.g., up to 10) for an undefined period and from a sample of vessels that are members of each specified association.			

3.3 DATA LIMITATIONS AND UNCERTAINTIES

3.3.1.1 A range of different data limitations and uncertainty exist for all of the Commercial Fisheries datasets assessed within this report. The level of uncertainty and confidence of each data set is defined in **Table 3.2** based on recognised data quality dimensions used in marine data assessments (e.g., spatial resolution, temporal coverage, and reporting completeness), and informed by the professional expertise of the assessment team.

3.3.1.2 Limitations of landings data include the spatial size of ICES rectangles which can misrepresent actual activity across the Offshore Project; and care is therefore required when interpreting these data. This is particularly the case for the local study area, which spans the west and east coast of the Isle of Lewis/*Eilean Leòdhais* which have different target fisheries based on benthic habitat type.

3.3.1.3 It is noted that all commercial landings by UK registered vessels are subject to the Register of Buyers and Sellers (RBS) legislation and therefore landings by UK vessels of all lengths are recorded within the MMO iFish database. While it is recognised that there is no statutory requirement for owners of vessels 10 m and under to declare their catches, registered buyers are legally required to provide sales notes of all commercially sold fish and shellfish due to the 2005 Registration of Buyers and Sellers of First-Sale Fish Scheme (RBS legislation) (MMO, 2022a; MMO, 2024a). The RBS legislation is applicable to licenced fishing vessels of all lengths and requires name and Port Letters and Numbers (PLN) of the vessel which landed the fish to be recorded in relation to each purchase. For the 10 m and under sector, landing statistics are recorded on sales notes provided by the registered buyers (MMO, 2022a; MMO, 2024a). Information that may not be formally recorded on the sales note, such as gear and fishing area, is added by coastal staff based on local knowledge of the vessels they administer - for example, from observations of the vessel during inspections at ports or from air and sea surveillance activities as well as discussions with the owner and/or operator of the vessel (MMO, 2022a; MMO, 2024a).

3.3.1.4 Limitations of VMS data are primarily focused on the coverage being limited to larger vessels (15 m and over for UK fishing vessels). It is important to be aware that where mapped VMS data may appear to show inshore areas as having lower (or no) fishing activity compared with offshore areas,

this is not necessarily the case because VMS data do not include vessels typically operating in inshore area (i.e. which typically comprises vessels <15 m in length). To assist in mitigating the risk of under-representing smaller inshore vessels a number of other data and information sources have been used:

- Static gear scouting surveys to observe locations of fishing gear;
- Consultation with inshore fishing sector;
- Analysis of fishing vessels plotter data;
- Site-specific marine traffic survey data comprising information on vessel movements gathered by both AIS and radar has been analysed alongside publicly sourced VMS and AIS data.

3.3.1.5 MMO fisheries patrol vessels and surveillance aircraft operate in coordination with the Royal Navy's Fisheries Protection Squadron. UK surveillance aircraft are used to construct an ongoing picture of fishing activity within the UK EEZ and to make effective use of patrol vessel activity by coordinated use of surveillance data. These datasets cannot be considered to give an accurate picture of the actual level of activity and have a number of limitations, including:

- Patrol effort by the Marine Directorate, Royal Navy Fisheries Patrol Vessels and patrol aircraft are optimised for enforcement purposes and not collection of sightings data. Areas with fewer fisheries enforcement issues are therefore likely to be visited less often and result in lower data confidence;
- Surveillance data are only indicative of areas where fishing activities occur, as there is no continuous monitoring of activities;
- Surveillance data present a snapshot of activity in an area and it cannot be assumed that if no vessels have been sighted then no fishing takes place;
- Vessels fishing at night would likely remain undetected.

Table 3.2: Data limitations and uncertainty (the uncertainty and confidence levels are defined based on judgement and are intended to inform the appropriateness of data used to inform the EIAR).

Source	Type of data	Limitation and uncertainty
MMO (2022a), MMO (2024a)	Landings statistics (2011 to 2024) data for UK-registered vessels.	The data is recorded from sales notes and landing declarations for all vessel lengths. Due to the UK legislation of RBS, data is considered accurate and verifiable. Data assessed with low uncertainty and high confidence.
EU DCF	Landings statistics (2012 to 2016) data for EU landings from the local and regional study area by country, species and gear type.	The data is submitted by individual member states and therefore limitations vary per country. Vessels under 10 m may be omitted or misrepresented by the data. Accuracy is likely to be greater for landings from larger vessels. For UK vessels under 10 m, length data is assessed with high uncertainty and low confidence. For all other EU vessels, data is assessed with low uncertainty and high confidence.
MMO (2022b)	UK VMS data for vessels ≥15 m length (2016-2020).	The data is only available for 15 m and over vessels, so is not representative of <15 m vessels. Data assessed with medium uncertainty and medium confidence.
ICES	EU SAR data for vessels ≥12 m length.	The data is only available for 12 m and over vessels, so is not representative of <12 m vessels. Data assessed with medium uncertainty and medium confidence.
EMSA	AIS data for fishing vessels ≥15 m length.	The data is only available for 15 m and over vessels, so is not representative of <15 m vessels. Data assessed with medium uncertainty and medium confidence.
Anatec	Marine traffic (AIS and radar) survey data (2023).	An assessment undertaken into fishing vessel activity within the Navigational Risk Assessment (NRA). Data assessed with low uncertainty and high confidence.
ERM (2024)	Scouting data	The data is for all vessel lengths. Data presents a snap-shot of activity at a specific time and is not routinely collected. Data assessed with medium uncertainty and medium confidence.
Fishing industry	Plotter data	The data is for a selection of representative vessels that are members of specific organisations and therefore does not represent all fishing activity. Plotter data is available across a long-term basis, expected to be approximately 10 years, however the time period is unknown and therefore does not allow identification of changes in fishing activity over time. Data is assessed with medium uncertainty and high confidence.

4 KEY SPECIES

4.1 INTRODUCTION

4.1.1.1 The key commercial species caught across the Commercial Fisheries local and regional study areas are discussed in this section in terms of biological characteristics, seasonal trends, and relevant fisheries management.

4.2 SHELLFISH

4.2.1 BROWN CRAB

4.2.1.1 Brown crab *Cancer pagurus* (also known as edible crab) is a long-lived, large decapod crustacean. Brown crabs are very productive animals and each female can hatch between 1-4 million eggs. Post larvae are known to settle inshore and juvenile crabs are more common in shallow waters. Adult crabs undertake extensive migrations, which may be associated with their reproductive cycle. Brown crab is found across a wide range of habitat types, ranging from rocky reefs to soft mud and sand.

4.2.1.2 Brown crab are caught by pots and have no Total Allowable Catch (TAC) or quotas in place. Primary management is by the technical measure of a Minimum Conservation Reference Size (MCRS) of 140 mm carapace width (CW) north of 56°N and 130 mm CW south of 56°N, with the exception of the Firth of Forth/*Linne Foirthe*.

4.2.1.3 Additionally, it is prohibited to land female egg-bearing edible crabs or crabs that have recently moulted, in accordance with The Sea Fisheries (Shellfish) Act 1967. When using pots or creels, landings of detached crab claws are restricted to no more than 1% of the total catch. If crab claws are by-catch from another fishery, the limit is set at 75 kg, as outlined in Article 18(4) of Council Regulation (EC) No 850/98.

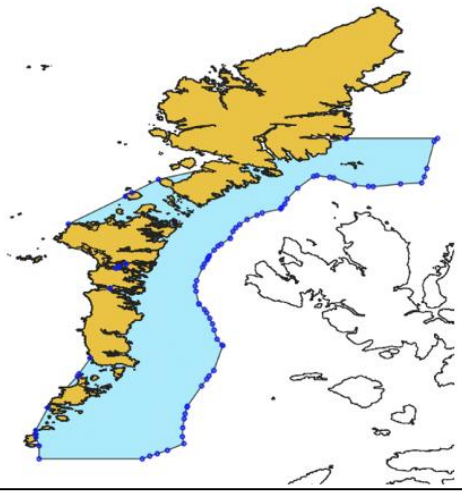
4.2.1.4 Up to 12 large vivier crabbing fishing vessels have operated in the offshore areas around North Rona/*Ròrnaigh*, Sula Sgeir, the Flannans Isles/*Na h-Eileanan Flannach*, and St Kilda/*Hiort*. These vessels land their catch at ports including Mallaig/*Malaig*, Uig/*Ùige*, Ullapool/*Ulapul*, Scrabster/*Sgrabastair*, and Orkney/*Arcaibh*. Additionally, the Outer Hebrides/*Na h-Eileanan Siar* has approximately 60 local vessels, mostly under 10 m in length, targeting brown crab and lobster, with their catch being sold either to the live market or for processing, depending on the season and meat yield. Fresh frozen bait is generally obtained from the mainland. Although there have been multiple attempts to establish local crab processing, only a small amount of processing occurs in Uist/*Uibhist*, with the majority of landings being sold live for export.

4.2.1.5 Local to the Offshore Project, the key port is Carloway/*Càrlabhagh*, where approximately 5 commercial vessels operate targeting brown crab (and lobster and other crab species) with creels/pots.

4.2.1.6 The most recent stock assessment by Marine Scotland Science for brown crab was published in 2023 based on stock assessment from 2016-2019 (Mesquita *et al.,* 2023). In the Hebrides/*Innse Gall* region it was found that both males and females are fished above F_{MSY}. F_{MSY} is the level of fishing mortality that supports the biomass reaching maximum sustainable yield. Sustained fishing pressure at this level, or an increase in fishing mortality could potentially reduce the biomass and the yield per recruit in the long term.

4.2.1.7 The Outer Hebrides Regional Inshore Fisheries Group (OHRIFG) trialled a Creel Limitation Pilot (CLP) from 2020 to 2022 with the objectives of reducing fishing effort and support recovery of shellfish stocks. Maximum creel limits were set specific to vessel length categories, for example 8-10 m vessels had a maximum creel limit of 1,200 creels and all vessel lengths had a maximum soak time of 3 weeks. However, the west coast of the Isle of Lewis/*Eilean Leòdhais* and the northeast coast of the Isle of Lewis/*Eilean Leòdhais* were not included in the CLP (**Plate 4-1**).

Plate 4-1: Location of Creel Limitation Pilot in the Outer Hebrides/*Na h-Eileanan Siar* and the maximum creel limits for vessel size classes (OHIFG, 2010)



Vessel Size Class	Maximum Creel Limit	Maximum soak time
<8m	800	3 weeks
8-10m	1200	3 weeks
10-12m	1500	3 weeks
>12m	1800	3 weeks

4.2.2 VELVET CRAB

4.2.2.1 The velvet crab *Necora puber* (also known as velvet swimming crab) is a decapod crab species found in northwest Europe from Norway to the Shetlands/*Sealtainn* and south to Spain and the Canary Isles and in the Mediterranean off the coasts of Malta. It is a fast moving and aggressive species, most commonly found on rocky substrates down to depths of about 25 m. Velvet crabs feed on both animal and algal material, with brown algae being the dominant item found in gut content analysis.

4.2.2.2 Females grow more slowly and to a smaller maximum size than males, differences which are likely to be due to reduced growth during the females egg bearing phase. Growth is highly seasonal and moulting generally occurs from June to August for males and females. Velvet crabs typically live for 4-6 years and recruit to the fishery at around age 3 (65 mm CW).

4.2.2.3 They reach maturity at a carapace width of approximately 50 mm, although size at maturity varies according to location. Mating occurs after females have moulted, when their shell is still soft. In contrast to brown crabs, velvet crabs are not thought to undertake extensive migrations and rarely move further than a few hundred metres.

4.2.2.4 The velvet crab fishery is currently managed by a shellfish licence and a minimum size of 65 mm carapace width; with no weight restrictions on landings. Fishing for velvet crab tends to be better in areas of strong currents and is typically undertaken in depths less than 20 m. Velvet crab are principally caught as a bycatch retained species as part of the brown crab and lobster targeted fisheries. Velvet crabs are sold live with transportation to southern Europe. Live storage facilities are used on a weekly basis by some companies to keep shellfish prior to distribution by vivier lorries, mainly destined for the Spanish market.

4.2.2.5 The latest Marine Scotland stock assessment (Mesquita *et al.,* 2023) indicates that in the Hebrides/*Innse Gall*, male velvet crabs are currently fished at F_{MSY} and females above F_{MSY}. The OHIFG management plan notes the occurrence of landing berried females, which are sorted at point of sale, rather than at point of capture. Berried females are not sold and sorting at point of sale can lead to low survivability and missed opportunity to return them to sea and provide recruitment to the velvet crab stock.

4.2.3 GREEN CRAB

4.2.3.1 Green crab *Carcinus maenas* is found on all types of shore, from high water to depths of 60 m in the sublittoral, but it is predominantly a shore and shallow water species. It tolerates a wide range of salinities and is especially abundant in estuaries and salt marshes.

4.2.3.2 Green crab are eaten mainly by fish and birds (e.g. gulls, commorants, eider ducks) although it depends on the size of the crabs and on geographic location

4.2.3.3 In northern parts of Britain, green crab migrates to subtidal areas and remains there until spring. During this time the crabs are inactive in shelters and do not feed (Dittmann & Villbrandt, 1999).

4.2.3.4 In general, green crab are often caught as bycatch retained species as part of brown crab and lobster targeted fisheries. It is noted that green crab is not targeted by the local potting fleet and based on local knowledge, are understood not to occur within the Array Area.

4.2.4 LOBSTER

4.2.4.1 Lobster *Homarus gammarus* is a long-lived decapod crustacean. Lobster breed once per year in the summer and newly berried females begin to appear from September to December. Lobsters do not undertake any significant migrations and juveniles in the first 3-4 years of life may be particularly sedentary. From hatching it takes approximately 5 years for a lobster to recruit to the fishery. Lobsters typically inhabit rocky reef and rough ground, sheltering in crevices between rocks and boulders. The availability of suitable habitat is considered to influence the carrying capacity and size structure of lobster populations (Seitz *et al*., 2014).

4.2.4.2 There are no TACs or quotas in place for lobster. Primary management is by the technical measure of a MCRS of 87 mm (Council Regulation 850/98).

4.2.4.3 In addition, it is illegal to land 'V'-notched lobsters, or animals that have been mutilated in any way. (The Lobsters and Crawfish (Prohibition of Fishing and Landing) (Scotland) Order 1999). Lobsters can only be retained on board or landed whole. (Article 18(3) of Council Regulation (EC) No 850/98) and there is a maximum landing size of 155 mm for female lobsters (Article 9 of The Inshore (Prohibition of Fishing Methods) (Scotland) Order 2004).

4.2.4.4 Lobster is one of the highest value per kilogram, commercially exploited shellfish species found in UK waters. Fishing activity typically peaks across summer months.

4.2.4.5 Lobster is a key target species in the Outer Hebrides/*Na h-Eileanan Siar* and are the second most economically important in the region. While landings of lobster peak in summer months, they are often live stored (e.g., at Kallin Pier) for the Christmas markets.

4.2.5 RAZOR CLAM

4.2.5.1 Razor clam *Ensis ensis*, *E. magnus* and *E. siliqua* (also known as razorfish or razor shell) are bivalve molluscs that live in vertical burrows in fine sand and muddy habitats, from extreme low water down to 60 m depth.

4.2.5.2 Razor clam are harvested via divers and logged under the 'other passive gear' category. Electrofishing is used to induce the clams to emerge from the sediment, enabling subsequent collection by divers. In the Outer Hebrides/*Na h-Eileanan Siar*, razor clam are caught within the inshore areas of the regional study area, and not the local study area. Landings are predominately made into Back/*Am Bac* and occur in highest quantities from March to September. Surveys have been completed in Broad Bay/*Loch a Tuath* (east coast of the Isle of Lewis/*Eilean Leòdhais*), Grimsay/Griomasaigh (North Uist/*Uibhist a Tuath*) and Loch Carnan (South Uist/*Uibhist a Deas*).

4.2.6 NEPHROPS

4.2.6.1 Nephrops *Nephrops norvegicus* also known as prawn or Norway lobster, and hereafter referred to as 'nephrops' (non-italicised, reflecting its use as a common name), is a small lobster, pale orange

in colour. It grows to a maximum total length of 25 cm (including the tail and clawed legs), although individuals are normally between 18-20 cm. Nephrops do not reach sexual maturity until 2-3 years. Life span in the North Sea is understood to be 8-9 years.

4.2.6.2 They are found in soft sediment, commonly at depths of between 200 m and 800 m, although considerable populations exist at depths <200 m. They live in shallow burrows and are common on grounds with fine cohesive mud which is stable enough to support their unlined burrows.

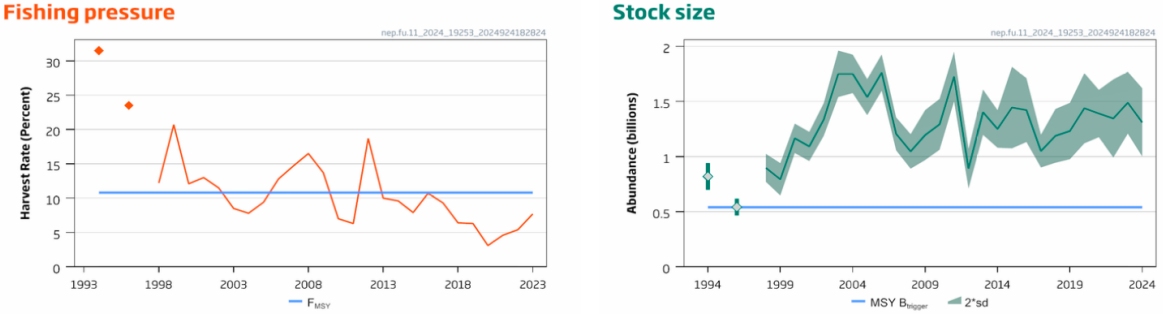
4.2.6.3 Nephrops is the most economically important target species in the Outer Hebrides/*Na h-Eileanan Siar*.

4.2.6.4 Nephrops stock assessments are conducted by ICES. Stock assessments are produced for 33 areas across the northeast Atlantic, called Functional Units (FUs). However, management is applied to 18 areas, called management units. The Commercial Fisheries local study area is not located within a nephrops FU. Management is applied via a TAC set for the whole of ICES Division 6, including Rockall and west of Scotland/*Alba* and covering North Minch, South Minch and Clyde and Jura FUs (ICES, 2024a).

4.2.6.5 There is a MCRS of 70 mm total length (and 20 mm carapace length) for nephrops in the west of Scotland/*Alba*. The landing obligation requires target species to be landed, and therefore prohibits the discarding of quota species. In UK waters, the landing obligation is implemented via the Fisheries Act 2020 UK Statutory Instrument 2020 No.1542. For the nephrops trawl fishery in the west of Scotland/*Alba*, there is a de minimis exemption from the landing obligation to allow vessels to discard a limited amount of nephrops below MCRS.

4.2.6.6 Under the Fisheries Act 2020, the Marine Directorate are currently developing a Nephrops Fisheries Management Plan for the west of Scotland/*Alba*. The Offshore Project does not overlap with any nephrops FUs. Landings from the local study area are from fisheries targeting the North Minch FU on the east of the Isle of Lewis/*Eilean Leòdhais*. Stock assessments are undertaken annually by ICES using underwater TV surveys. The North Minch nephrops FU stock status is considered to be in good condition, with abundance above the maximum sustainable yield (MSY) trigger reference point and fishing pressure below the corresponding MSY for harvest rate (**Plate 4-2**) (ICES, 2024a).

Plate 4-2: Nephrops North Minch Functional Unit stock assessment indicating fishing pressure and stock size (ICES, 2024a)



4.2.7 KING SCALLOP

4.2.7.1 King scallop *Pectan maximus* are most common in water depths of 20 m to 70 m, in areas of clean firm sand and fine gravel exposed to water currents, which provide good feeding conditions for this bivalve mollusc. Adults are largely sedentary and usually found recessed in sediment. King scallop live for 10 to 15 years and reach reproductive maturity between 3-5 years, at a size of 60 mm; the average maximum size is 160 mm. Recruitment is usually unpredictable as it depends not only on successful spawning and larval production but also on if larvae are retained or transported to areas suitable for larval settlement. Larvae are pelagic making settlement in a particular area somewhat unpredictable, which leads to an unstable age structure within stocks. As a consequence of this, scallop beds frequently show a regional separation of year classes and spatial variability in age structure.

4.2.7.2 The latest analytical assessment of stock status in Scottish waters was undertaken in 2024. In the local study area, king scallop area targeted on the east coast of the Isle of Lewis/*Eilean Leòdhais*. The scallop stock assessment for the northwest coast concluded that the landings and fishing mortality have declined in recent years and that the spawning stock biomass and recruitment are both below the long term average for the time series.

4.2.7.3 There are no TACs (i.e. catch limits) or quotas in place for this species; instead, UK scallop fisheries are controlled predominantly through the use of minimum legal landing sizes, gear restrictions, seasonal closures and some effort controls on the largest boats. An EU MCRS exists of 100 mm (Council Regulation 850/98).

4.3 CEPHALOPODS

4.3.1 SQUID

4.3.1.1 Squid *Loligo forbesi* is the most important fished cephalopod in Scottish waters and the only cephalopod for which there is a reliable market, although other squid species (e.g. *Todarodes sagittatus*) and octopus *Eledone cirrhos* are frequently caught and landed as 'mixed squid and octupi'. Consultation with fishing gear manufacturers indicates a reported increase in octopus presence in the region, suggesting potential for development of a future targeted pot fishery.

4.3.1.2 The squid fishery occurs in coastal waters, and is highly seasonal with landings predominately in January, and smaller amounts in February and March. In the UK squid is normally taken as a bycatch from the mixed demersal otter trawl fishery.

4.3.1.3 The UK fishery for squid is not subject to management regulations for a TAC or quota or any other limits.

4.3.1.4 Squid are normally associated with the water column, above sandy or hard substrate. Squid require presence of substrata for the attachment of egg strings during the spawning period.

4.4 PELAGIC FINFISH

4.4.1 HORSE MACKEREL

4.4.1.1 Horse mackerel *Trachurus trachurus* is a pelagic coastal species distributed across the eastern Atlantic continental shelf, found down to over 200 m depth. They are commonly caught in both pelagic and bottom trawl surveys, suggesting they spend some time near the seabed. Horse mackerel can reach 60 cm in length and feed primarily on crustaceans, cephalopods and teleosts, with lowest intensity feeding recorded during winter months when sea temperatures are lowest.

4.4.1.2 The commercial horse mackerel fishery is highly seasonal, with landings from the regional study area recorded in January to February and October to November.

4.4.2 MACKEREL

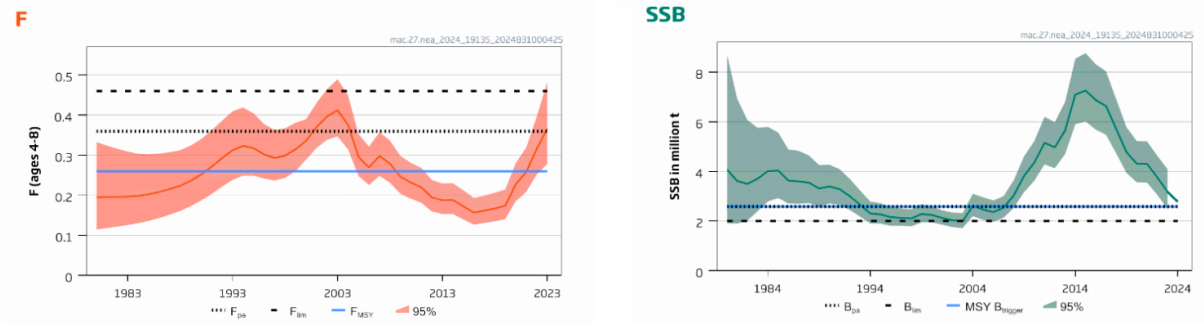
4.4.2.1 Mackerel *Scomber scombrus* are a pelagic species that live near the surface of the sea in large shoals. The Northeast Atlantic stock overwinters in the deep water, to the east and north of Shetland/*Sealtainn* and on the edge of the Norwegian Deep.

4.4.2.2 In terms of fisheries management measures, a TAC is in place that covers all Northeast Atlantic fisheries. A minimum conservation reference size of 20 cm is in place.

4.4.2.3 The commercial fishery follows the spawning migration to target this highly seasonal fishery, with landings in January and February.

4.4.2.4 The mackerel spawning stock biomass has undergone significant decline since 2014 (**Plate 4-3**) and is approaching MSY Btrigger, while fishing mortality has increased rapidly over this same period and is currently at Fpa.

Plate 4-3: Mackerel Northeast Atlantic and adjacent waters stock assessment indicating fishing pressure and stock size (ICES, 2024b)



4.4.3 HERRING

4.4.3.1 Herring *Clupea harengus* is a pelagic shoaling species that move between spawning and wintering grounds in coastal areas and feeding grounds in open water. Herring populations are known to use traditional spawning grounds, many of which are along shallow coastal areas (15 m to 40 m depth),

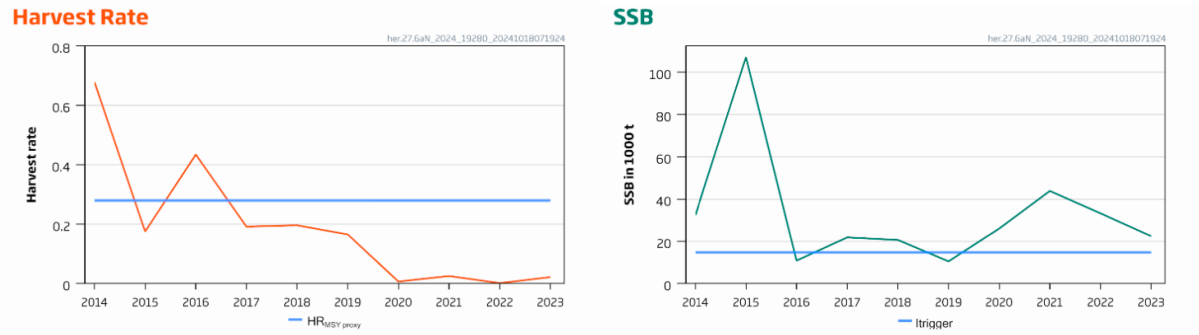
or on offshore banks down to 200 m. Spawning usually occurs on gravel or rock bottoms. Spawning is highly associated with benthic habitat type.

4.4.3.2 Applicable to directed herring fisheries in the west of Scotland/*Alba*, there is a MCRS of 23 cm for human consumption (6 cm above the size of maturity). Catches below this size must be landed but cannot be sold for human consumption, and so are less valuable.

4.4.3.3 The latest ICES (2024c) advice indicates that the spawning stock biomass is above the biomass index trigger reference points and the fishing pressure is well below fishing mortality reference points (**Plate 4-4**).

4.4.3.4 Gravel substratum is an essential habitat for herring spawning in autumn. ICES notes that there has been an increase in marine anthropogenic activity that may have a negative impact on the spawning habitat of herring (ICES, 2024c). This includes dumping of dredge spoil, the extraction of marine aggregates (e.g. gravel and sand), and the erection of structures such as wind turbines in the vicinity of spawning grounds. ICES advice stats that "*activities that have a negative impact on the spawning of herring should not occur, unless the effects of these activities have been assessed and shown not to be detrimental to the productivity of the stock*" (ICES, 2024c).

Plate 4-4: Herring autumn spawners (west of Scotland/*Alba*) stock assessment indicating fishing pressure and stock size (ICES, 2024c)



4.5 DEMERSAL FINFISH

4.5.1 BALLAN WRASSE

4.5.1.1 Ballan wrasse *Labrus bergylta* is a valuable species in the aquaculture sector, particularly in salmon farming, where it is employed as a cleaner fish to control parasitic sea lice infestations. This natural method of lice control reduces the reliance on chemical treatments and promotes more sustainable farming practices. The Ballan wrasse fishery in the Outer Hebrides/*Na h-Eileanan Siar* catches wild ballan wrasse using specific pots or traps and sells these fish live to aquaculture companies.

4.5.1.2 Ballan wrasse are caught from the local study area in summer and autumn months, with a first sales value of £150,000 in 2023. While breeding of ballan wrasse in aquaculture is being explored in

Scotland/*Alba* in order to supply the salmon farming industry, recent commercial landings indicate that it remains an important fishery in the local study area.

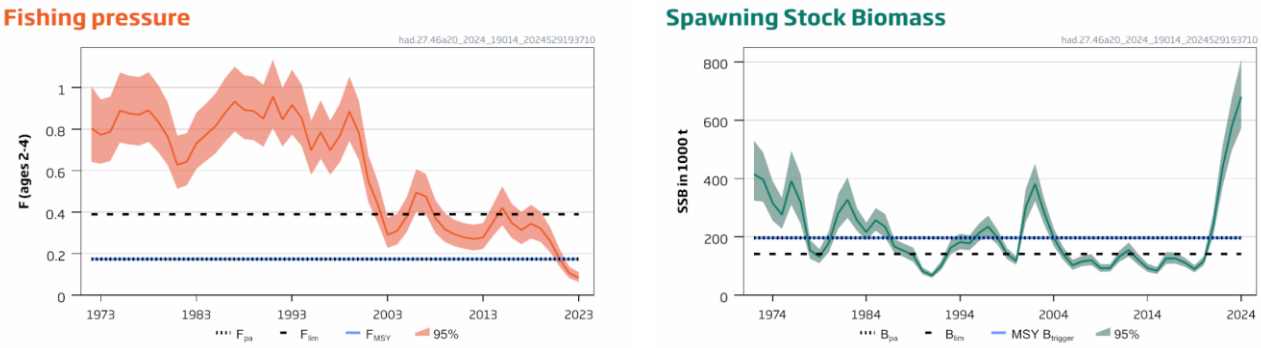
4.5.2 HADDOCK

4.5.2.1 Haddock *Melanogrammus aeglefinus* is a demersal bottom feeding round fish that occur mainly in waters from 40 m to 200 m deep. Haddock mature at around 2-3 years of age and feed mainly on small bottom-living organisms including crustaceans, molluscs, echinoderms, worms and fishes.

4.5.2.2 In the west of Scotland/*Alba*, haddock are caught as part of a mixed whitefish fishery and are also taken as bycatch in the nephrops trawl fishery. The spawning stock biomass of haddock is currently well above biological limits and fishing pressure is low; indicating that the species is currently harvested sustainably (**Plate 4-5**). ICES (2024d) advice indicates that the recruitment in 4 recent year classes (2019 to 2022) has been above the recent mean level; this high recruitment, in combination with low fishing mortality, has led to a sharp increase in spawning stock biomass as shown in **Plate 4-5**. The ICES catch advice for this stock in 2025 is 112,435 tonnes, which represents a reduction of 25% compared to ICES catch advice for 2024 of 149,024 tonnes.

4.5.2.3 Landings occur throughout the year and on average peak during autumn.

Plate 4-5: Haddock North Sea, west of Scotland/*Alba*, Skagerrak stock assessment indicating fishing pressure and stock size (ICES, 2024d)



4.5.3 MONKFISH

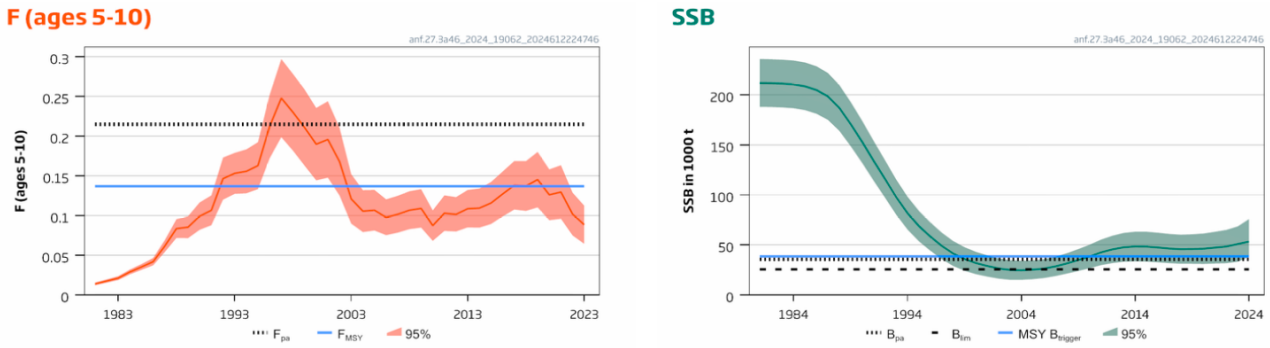
4.5.3.1 There are 2 closely related species of monkfish; white monkfish *Lophius piscatorius* and black monkfish *L. budegassa*, both recognisable from the colour of their belly (although may need to be cut open for identification). White monkfish occur throughout the Northeast Atlantic and are more abundant than black monkfish in northern areas. It is a very distinctive fish, recognizable by having its head and body depressed, a wide mouth, broad head and a fleshy 'lure' at the end of its first dorsal spine, which is used to attract prey. They can live up to 24 years and reach 200 cm in length, reaching maturity at 4-5 years at a length of 35 cm.

4.5.3.2 Both species are most abundant from 200 m-500 m, with white monkfish also occurring down to 800 m. It is found mostly on sandy or muddy bottoms but is also present on shell, gravel and occasionally rocky areas.

4.5.3.3 A minimum marketing weight is in place (EC 2406/96) of 500 g gutted or 200 g tail per individual. A single TAC applies to both species of monkfish as they are often not separated in the landings.

4.5.3.4 Monkfish are a highly valuable demersal fish species, caught almost exclusively by demersal otter trawls. The spawning stock biomass fell significantly from 1980s to a record low in 2004 and has recovered to be above $MSYB_{trigger}$ in 2024 (**Plate 4-6**).

Plate 4-6: Monkfish in subareas 4 and 6, and in Division 3.a stock assessment indicating fishing pressure and stock size (ICES, 2024e)

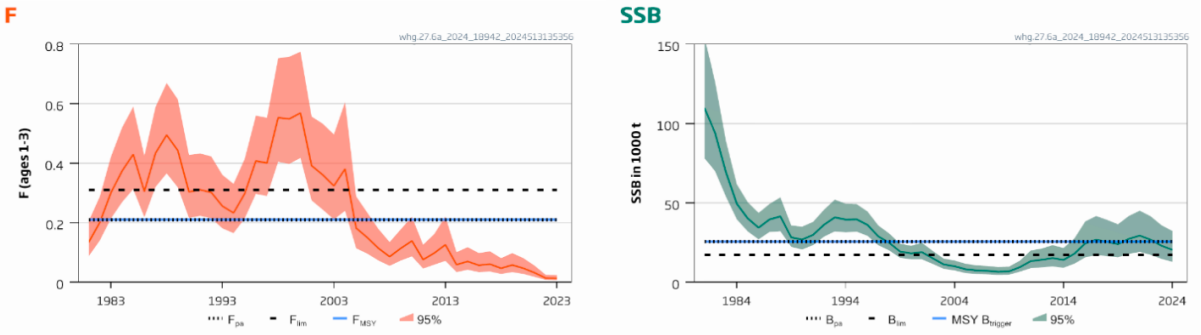


4.5.4 WHITING

4.5.4.1 Whiting *Merlangius merlangus* are commonly found on mud and gravel bottoms, but also on sand and rock. Whiting migrate to the open sea after the first year of life (Cohen *et al.*, 1990). ICES consider the west of Scotland/*Alba* stock to be harvested sustainably with fishing mortality well below precautionary and limit reference levels. However, the spawning stock biomass is below $MSYB_{trigger}$, but above B_{lim}, so not at the point of recruitment impairment and has been fluctuating around $MSYB_{trigger}$ in recent years (**Plate 4-7**).

4.5.4.2 Whiting is targeted by demersal otter trawlers as part of targeted and mixed demersal fisheries.

Plate 4-7: Whiting west of Scotland/*Alba* stock assessment indicating fishing pressure and stock size (ICES, 2024f)



5 KEY FISHING GEARS

5.1 INTRODUCTION

5.1.1.1 There are 3 descriptive units used for defining fisheries (Marchal, 2008):

- Fishery – a group of vessel voyages which target the same species or use the same gear;
- Fleet – a physical group of vessels sharing similar characteristics (e.g. Nationality, gear and target species);
- Métier – a homogenous subdivision, either of a fishery by vessel type or a fleet by voyage type.

5.1.1.2 A range of fleets target different fisheries across the Commercial Fisheries local and regional study areas which are described on a fleet basis within this section.

5.1.1.3 Fisheries restrictions are presented in **Plate 5-1**. The following fishing restrictions are in place that are relevant to the Offshore Project:

- Bragar/*Bhràdhagair* to Dell Protected Area: Fishing for any species with a creel or parlour creel is prohibited from 01 November to 31 March. This overlaps the inshore area of the OCAS;
- Gallan Head to Aird Barvas: Prohibition of suction dredging. This overlaps the inshore area of the OCAS;
- Loch Roag: Fishing for sea fish with mobile or active gear is prohibited at all times. This area does not overlap the Offshore Project;
- Broad Bay/*Loch a Tuath*: Fishing for sea fish with mobile or active gear is prohibited at all times. This area is located on the east of the Isle of Lewis and does not overlap the Offshore Project.

5.1.1.4 In addition, recent management measures (May, 2025) have introduced tighter controls on creel fishing within Scotland/*Alba*'s inshore waters (0–6 nm from the baseline). Vessels larger than 14 m are prohibited from deploying crab or lobster creels, pots or traps within this inshore zone. Additionally, vessels over 12 m that have historically landed more than 200 tonnes of crab and lobster within any 12-month period since 2020 are required to operate outside the 6 nm limit (Scottish Government, 2025). This restriction is applicable for all areas inshore from the 6 nm boundary line, which is shown in purple in **Plate 5-1**.

Plate 5-1: Fishing restrictions (Source: Seafish Kingfisher, 2024).

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

Union and NEAFC waters (ICES divisions 5b, 6a, 7bchjk - deeper than 600m)
Union Waters (deeper than 800m)

46E1 46E2 46E3 46E4

Union and NEAFC waters (ICES divisions 5b, 6a, 7bchjk - 200-600m depth)

45E1 45E2 45E3 45E4

Flannan Isles

Bragar to Dell Protected Area

Gallan Head to Aird Barvas

Broad Bay

Loch Roag Protected Area

44E1 44E2 44E3 44E4

Barra Head (Berneray) to Harris Protected Area

Sound of Harris Protected Area

Wester Ross protected area (single and twin rig trawl exception)

Wester Ross protected area

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit
- Fishing Restrictions

Data source: Seafish Kingfisher Mapping, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 5.1
Commercial Fisheries Restrictions

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-5.1	

5.2 POTTING

5.2.1.1 **Plate 5-2** shows typical potting vessels based at the local port of Carloway/*Càrlabhagh*, Isle of Lewis/*Eilean Leòdhais*; and **Plate 5-3** shows typical creels used in the area. The configuration of the gear in the water while fishing is depicted in **Plate 5-4** and **Table 5.1** describes the profile of potting vessels active across the Commercial Fisheries regional study area.

5.2.1.2 Creels or pots are used for the capture of lobsters and crabs, including brown crab, velvet swimming crab and green crab. Creels are typically rigged in 'fleets' or 'strings' of between 15 to 60 pots, depending upon vessel size and area fished. Hundreds of pots can be deployed across a fishing location. Lengths of fleets may range from 100 m to over 1,500 m, anchored at each end with anchors or chain clump weights. A variety of surface markers are used, including flagged dhans, buoys and cans. Soak times, the time between emptying and re-baiting the pots, can vary between 6 and 168 hours, but would typically be 24 hours. All pots are worked on a rotational basis; after hauling and emptying, pots are baited and reset. Creel design is typically D-shaped in section and made from steel rods covered in netting and protected or 'bumpered' with rope or rubber strips. Creels are usually deployed on rocky substrate, though may less frequently be found on other softer substrates, such as mud when targeted nephrops.

5.2.1.3 Larger potters working further offshore make fishing trips lasting around 2 days. Smaller potters under 10 m in length operate as day boats, returning to port after hauling, emptying, baiting and resetting fleets of pots. Potting vessels may target a single or multiple shellfish species.

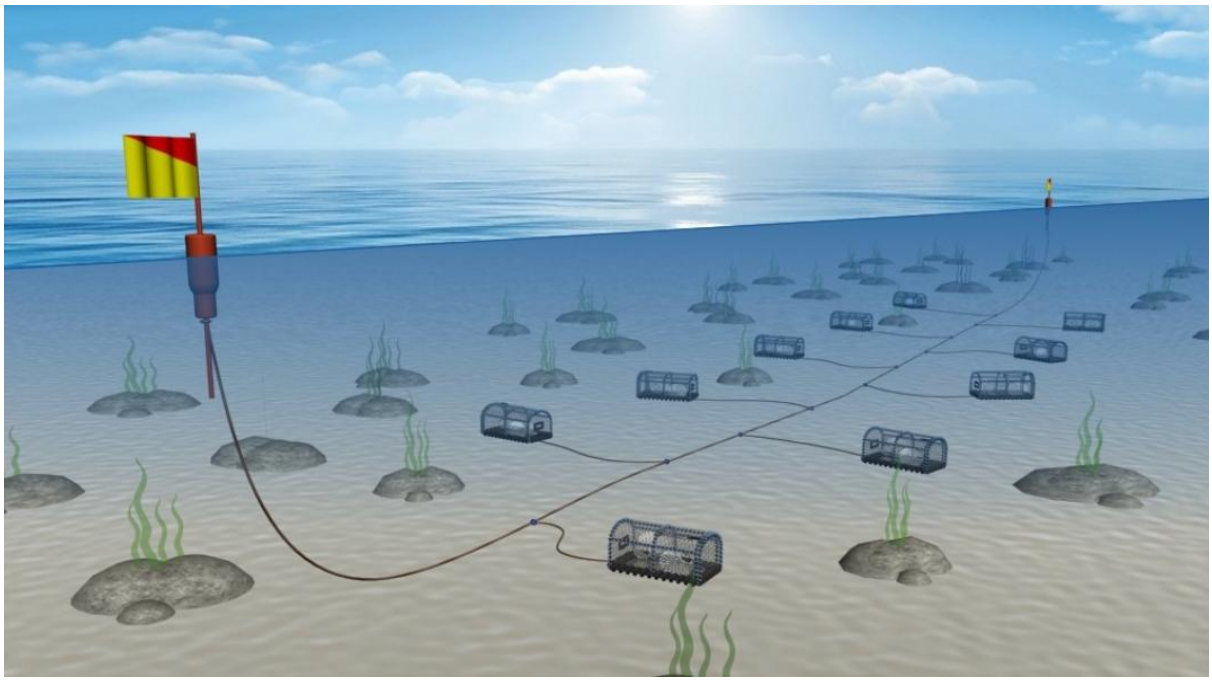
Table 5.1: Profile of typical potting vessels

Parameter	**Indicative Details**
Main target species	Brown crab, lobster, velvet swimming crab, green crab, ballan wrasse, and nephrops
Nationality	Scottish
Vessel length	Over 10 m and under 10 m
Horsepower	60 to 350 hp
Typical towing speed	0 to 9 knots
Typical gear	Fleets of baited pots placed on the seabed. Pots typically hauled daily but may be left a number of days. Generally, day boats that return to port daily.

Plate 5-2: Typical potting vessels based at Carloway/*Càrlabhagh*, Isle of Lewis/*Eilean Leòdhais* (NiMa, 2024)

Plate 5-3: Typical creel gear (NiMa, 2024)

Plate 5-4: Profile of typical potting gear configuration (Seafish, 2022)



5.3 DEMERSAL OTTER TRAWL

5.3.1.1 **Plate 5-5** shows typical demersal otter trawlers based at Stornoway/*Steòrnabhagh*, Isle of Lewis/*Eilean Leòdhais* and **Plate 5-6** depicts associated gear as deployed while actively fishing. **Table 5.2** describes the profile of demersal otter trawling vessels active across the commercial fisheries regional study area. Otter trawls typically catch gadoids (including haddock, cod, whiting), squid, plaice, and nephrops; however, the species composition of the catch depends on the area and depth fished, and the gear design.

5.3.1.2 Vessel numbers vary, and their presence is dependent upon the success of demersal and/or nephrops catches elsewhere.

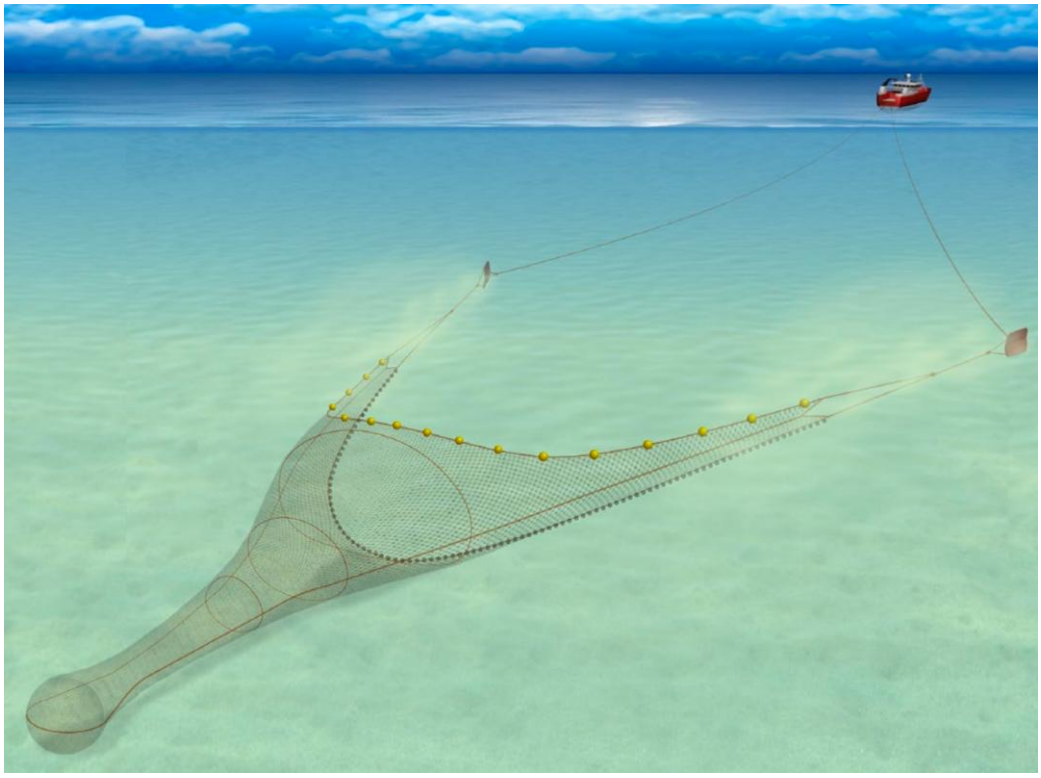
5.3.1.3 Demersal trawlers operating across the commercial fisheries regional study area tend to tow in directions which are in line with natural seabed contours.

Table 5.2: Profile of typical demersal otter trawling vessels

Parameter	**Indicative Details**
Main target species	Nephrops, haddock, whiting, squid, monkfish
Nationality	Scottish
Vessel length	16 to 35 m
Horsepower	300 to 850 hp
Typical towing speed	2 to 6 knots
Typical gear	Possible twin or multi-rig bottom trawl. 2 trawl doors ('otter boards') approximately 1 tonne each hold the net open. Various forms of ground gear depending on target species.

Plate 5-5: Profile of typical demersal otter trawler vessels based at Stornoway/*Steòrnabhagh*, Isle of Lewis/*Eilean Leòdhais* (NiMa, 2024)

Plate 5-6: Trawl gear diagram (Seafish, 2022)



5.4 DREDGE

5.4.1.1 A typical scallop dredging vessel is shown in **Plate 5-7** and **Table 5.3** describes the profile of scallop dredging vessels active across the commercial fisheries regional study area.

5.4.1.2 Dredges are rigid structures that are towed along the seabed to target various species of shellfish. Scallop dredgers fish as the tooth bar of each dredge rakes through the sediment lifting out scallops and the spring-loaded tooth bar swings back, allowing the dredge to clear obstacles on the seabed. The dredges are held in a series on 2 beams, which are fished on each side of the vessel, as shown in **Plate 5-8**.

5.4.1.3 UK scallop dredgers operate around the entire coastline of the UK. Scallop dredging takes place year round. The UK scallop fleet comprises 2 principal components: larger vessels (>20 m) that undertake wide-ranging operations across both inshore and offshore scallop grounds, and smaller vessels (<15 m) that typically operate within local inshore areas. Larger nomadic vessels tend to fish intensely in an area until harvesting scallops becomes unprofitable. They will then move on to new areas but will return a number of years later when the scallop stocks have returned to a level where dredging for them has once again become viable. Due to this fishing pattern, a large scallop dredger may operate in 4 or 5, or even more, areas and rotate around them over a period of several years. In this way, most of the suitable grounds around the UK are fished. At the other end of the spectrum are the smaller, inshore vessels, including some who will only fish for scallops on a part time basis, and others who rely on scallops for the majority of their income. These vessels are restricted, primarily by their size, in the areas and weather that they can fish meaning that they are likely to dredge for scallops only in their local area. The catching capacity of these vessels is significantly lower than the large vessels due to the lower number of dredges they can tow.

5.4.1.4 Scallop dredging is an activity which is generally engaged by larger (>10 m vessel length) vessels due to the engine capacity required to tow this heavy fishing gear.

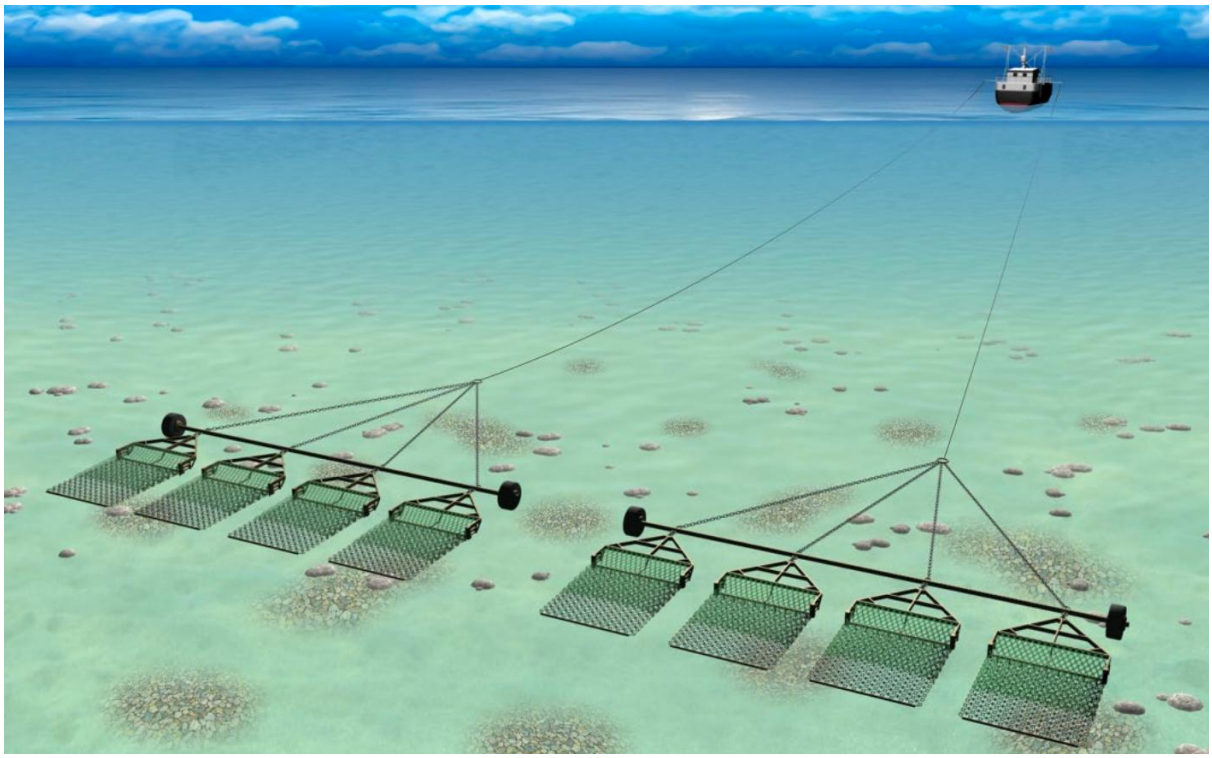
5.4.1.5 Not all scallops in the path of the dredge are retained by the dredges and efficiency of the Newhaven dredge (commonly used in the UK commercial scallop fishery) can vary between <10% on soft ground to 51% on hard ground. Dredge efficiency is affected by ground type (e.g. soft sand, gravel, or cobble), towing speed, warp length, tide strength, and direction and the experience of the skipper.

Table 5.3: Profile of typical dredging vessels

Parameter	Indicative Details
Main target species	King Scallop
Nationality	Scottish, English
Vessel length	10 to 25 m
Horsepower	200 to 400 hp
Typical towing speed	2 to 6 knots
Typical gear	Up to 16 dredges per side of vessel. Each dredge consists of a triangular frame leading to an opening, a tooth bar with spring-loaded teeth, and a bag of steel rings and netting back.

Plate 5-7: Typical scallop dredge vessel (NiMa, 2024)

Plate 5-8: Profile of typical scallop dredging gear (Seafish, 2022)



5.5 PELAGIC TRAWL

5.5.1.1 **Plate 5-9** shows a typical pelagic trawl vessel and **Table 5.4** describes the profile of pelagic trawl vessels active across the commercial fisheries local and regional study areas.

5.5.1.2 Pelagic or mid-water trawls are towed at the appropriate level in the water column to intercept shoaling fish such as herring and mackerel, as shown in **Plate 5-10**. The location of the shoals is determined by sonar or vertical sounder echoes. Pelagic vessels typically require up to 2 nm to position their nets, undertake a tow and then haul nets.

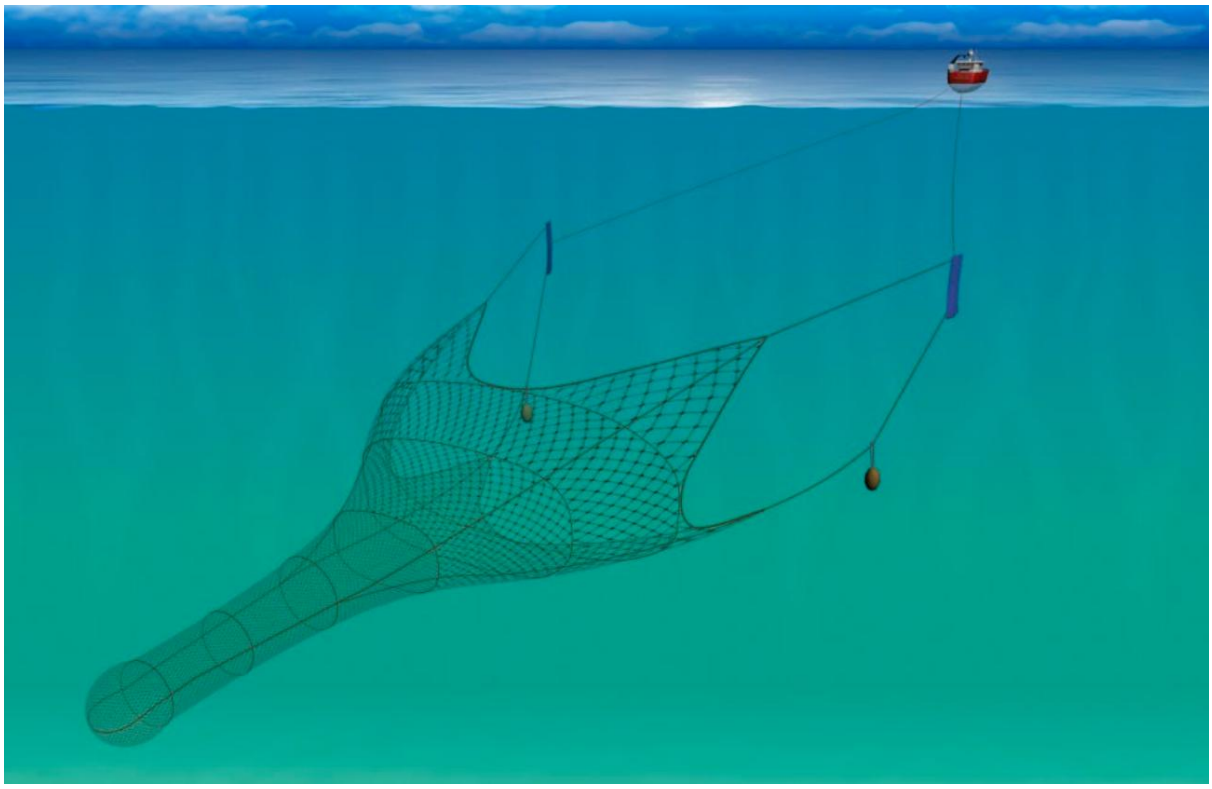
5.5.1.3 Catches with pelagic trawl form a significant portion of the annual landings (21% by landed value) from the Commercial Fisheries regional study area. Landings are made by vessel greater than 15 m in length, across a number of countries, including the UK and Norway.

Table 5.4: Profile of typical pelagic trawling vessels

Parameter	**Indicative Details**
Main target species	Mackerel, herring, horse mackerel
Nationality	Scottish
Vessel length	30 to 50 m
Horsepower (hp)	500 to 1,200 hp
Typical towing speed	2.5 to 5 knots
Typical gear	Pair or single trawls. Net depth changed by altering either warp (rope) length or towing speed.

Plate 5-9: Typical pelagic trawl and vessel (NiMa, 2024)

Plate 5-10: Profile of typical pelagic trawling gear (Seafish, 2022)



5.6 HANDLINE

5.6.1.1 Small inshore vessels of under 10 m length (with a specification broadly aligned with that provided immediately above for inshore netting vessels) use hook and line methods to primarily target mackerel, though a variety of other species may be taken. Details of typical gear operational attributes are provided in **Table 5.5**, with gear configuration illustrated in **Plate 5-11**.

5.6.1.2 Mackerel handlining is typically deployed seasonally by vessels that also deploy pots. In this fishery, a fisher uses a single line with a weight and multiple hooks, often as many as 20 or 30. The hooks are typically equipped with small feathers or pieces of coloured plastic to serve as lures, although sometimes the fish will bite a bare, shiny hook without any added attractants. The lines are hauled by hand, and the fish are shaken off as they come aboard. Alternatively, the line may be wound onto a large reel, known as a 'gurdy.' In this case, the line is often passed through a device called a 'stripper,' which removes the fish from the hooks as the line is brought in. This system allows the line to be re-shot immediately after the last hook passes through the stripper.

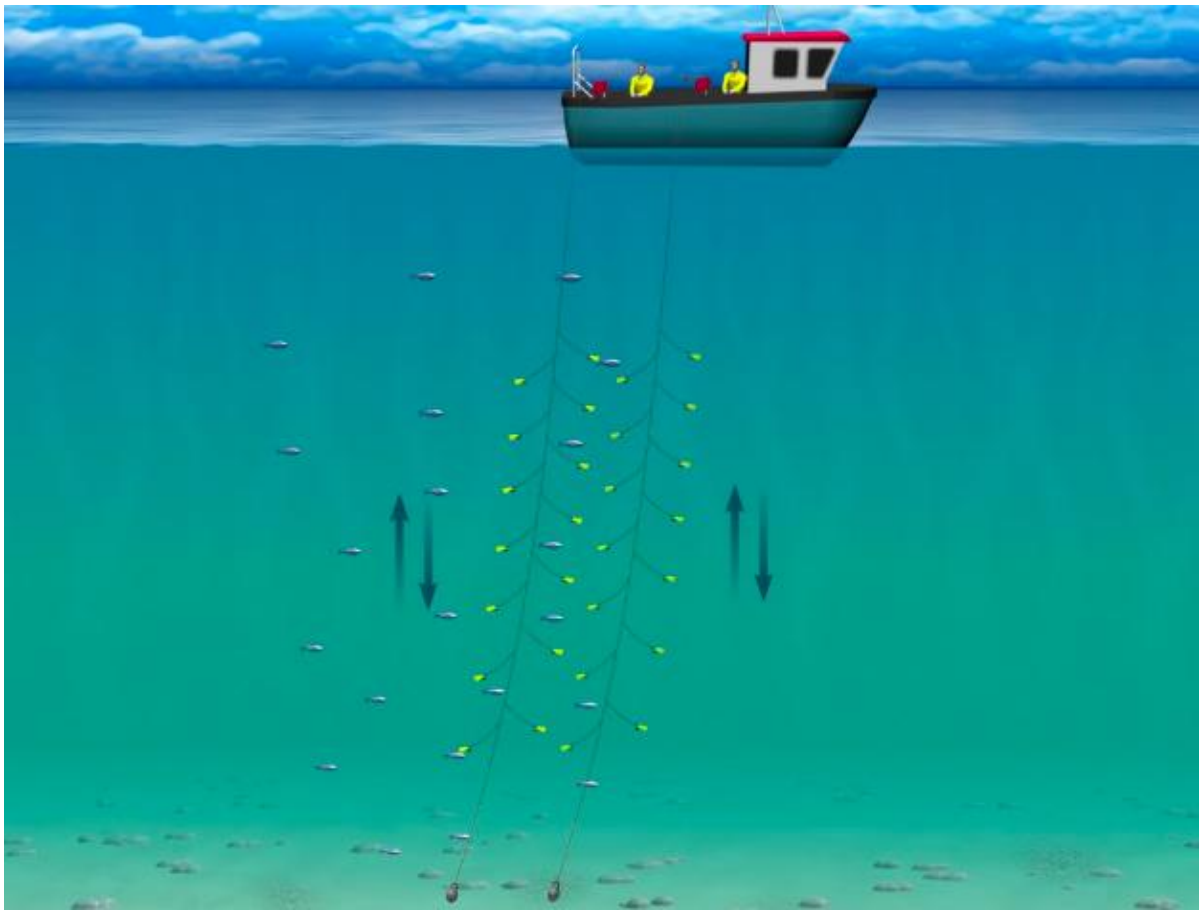
5.6.1.3 Some fishers use electronic jigging machines which are computer-controlled and can be programmed to drop lures to a specific depth, then retrieve them once a fish bites. While

the lines in the Scottish fishery are hauled by a machine, the fish are still categorised as handline caught.

Table 5.5: Profile of typical handline vessels active across the regional study area

Parameter	**Indicative Details**
Main target species	Mackerel
Nationality	Scottish
Vessel length	Majority under 10 m
Seasonality of activity	Summer/autumn peak
Typical gear	Single line with a weight and multiple hooks with small feathers or pieces of coloured plastic to serve as lures.

Plate 5-11: Typical line-jigging configuration (Source: Seafish, 2022)



6 OVERVIEW OF LANDING STATISTICS

6.1 LOCAL COMMERCIAL FISHERIES STUDY AREA

6.1.1.1 Commercial Fisheries statistics for the annual first sales value and landed weight by UK vessels operating within the specified Commercial Fisheries local study area (45E3) are shown in **Plate 6-1** and **Plate 6-2** respectively. An annual average value of £3.9 million was landed by all UK vessels for the years 2019-2023 from the Commercial Fisheries local study area, compared to an average value of £4.6 million per annum from 2014-2018 (based on landing statistics data from the MMO, 2022a, 2024a). The timeseries considers landings from 2011-2023 to explore long term trends in catches from the local study area.

6.1.1.2 The local study area is defined as ICES rectangle 45E3 (**Plate 2-1**), which overlaps with the west and east coasts of the Isle of Lewis/*Eilean Leòdhais*. These west and east regions contain very different target fisheries, due to the seabed that offers differing benthic habitats for a range of commercial species. The west coast is typically dominated by hard ground supporting crab species and lobster; while the muddy and coarse sediments on the east coast bring landings dominated by king scallop and nephrops. This highlights the importance of considering both landing statistics and spatial mapping of fishing activity to gain a true understanding of the activity across the Offshore Project.

6.1.1.3 The statistics indicate that nephrops are the most economically important species, with an average annual value of £2.47 million, based on 2011 - 2023 timeseries. Nephrops are landed from the North Minch nephrops FU stock, and primarily focused on the east coast across very fine muddy sediment.

6.1.1.4 As indicated in **Plate 6-1** landings of brown crab are the second most economically important, followed by lobster, with £707,000 and £251,000 respectively landed on average annually (based on data from 2011-2023). Other important species include king scallop (£202,000 per annum), razor clam (£130,000 per annum), and velvet crab (also known as velvet swimming crab) (£111,000 per annum). Based on VMS spatial data for dredge fishing gear, king scallop are understood to be primarily caught on the east coast of the Isle of Lewis/*Eilean Leòdhais*. Information from the FLO corroborates that scallop dredgers are not active within the Offshore Project.

6.1.1.5 By weight, landings are primarily dominated by nephrops with an average of 456 tonnes per annum, followed by brown crab 442 tonnes per annum. A significant drop in brown crab landings is noted from the local study area from 2018 onwards, both in terms of landed value and landed weight. From 2018 to 2023, on average 144 tonnes of brown crab with a first sales value of £379,000 was landed, compared to 700 tonnes and £990,000 annual average from 2011-2017. It is not clear why brown crab landings have undergone this

significant drop, but a general downward trend in brown crab landings is being experienced throughout the UK.

6.1.1.6 Landings of wrasse species, including ballan wrasse are notable, with spikes in specific years, such as 2016 and 2020. Wrasse are caught to enter aquaculture fish farms to act as cleaner fish to manage sea lice.

6.1.1.7 The majority of landings by UK fishing vessels are made by vessels registered in Scotland/*Alba* (97% by value), with a smaller proportion by Northern Irish (3% by value) and English (<1% by value) vessels. This has been consistent throughout the timeseries analysed (**Plate 6-3**).

6.1.1.8 Landings statistics data per annum are presented in **Plate 6-4**, indicating that the highest value landings were made from 2014-2018 when the annual average was £4.6 million, compared to £4.0 million from 2011-2013 and £3.9 million from 2019-2023.

6.1.1.9 Landed value by gear type for the Commercial Fisheries local study area is shown in **Plate 6-5**. The highest value is landed by pots and traps, with an average of £1.6 million landed per annum. A significant peak is noted in 2016, with a value of £2.6 million landed from the local study area by pots in that year. The trend in landings by potting gear does not reflect the large drop in brown crab landings; this is because a number of species are caught in pots, including nephrops, lobster, velvet swimming crab and wrasse species (**Plate 6-6**). In particular, landings of nephrops by potting gear has increased in recent years.

6.1.1.10 It is noted that 2 different demersal otter trawl gears are used to target demersal fisheries, each with different mesh size ranges as defined by internationally recognised gear groupings; specifically gear type TR1 (with net mesh size of ≥100 mm) to target haddock, and gear type TR2 (with net mesh size of 70 mm to 99 mm) to target nephrops. Both gear types retain a mix of demersal species as bycatch.

6.1.1.11 Seasonality of landings from the local study area are depicted in **Plate 6-7**. Nephrops show peaks in the summer months, and also early spring. Brown crab are caught throughout the year, with highest catches in autumn and early winter. King scallop landings are mainly in autumn and winter, while velvet swimming crab is fairly even throughout the year, with a sudden spike in December. The lobster fishery peaks in summer months, notably August. Razor clam landings are from spring to autumn, with very low levels over winter months.

Plate 6-1: Key species by annual landed value (GBP) (2011 to 2023) from the commercial fisheries local study area (MMO, 2022a; MMO, 2024a)

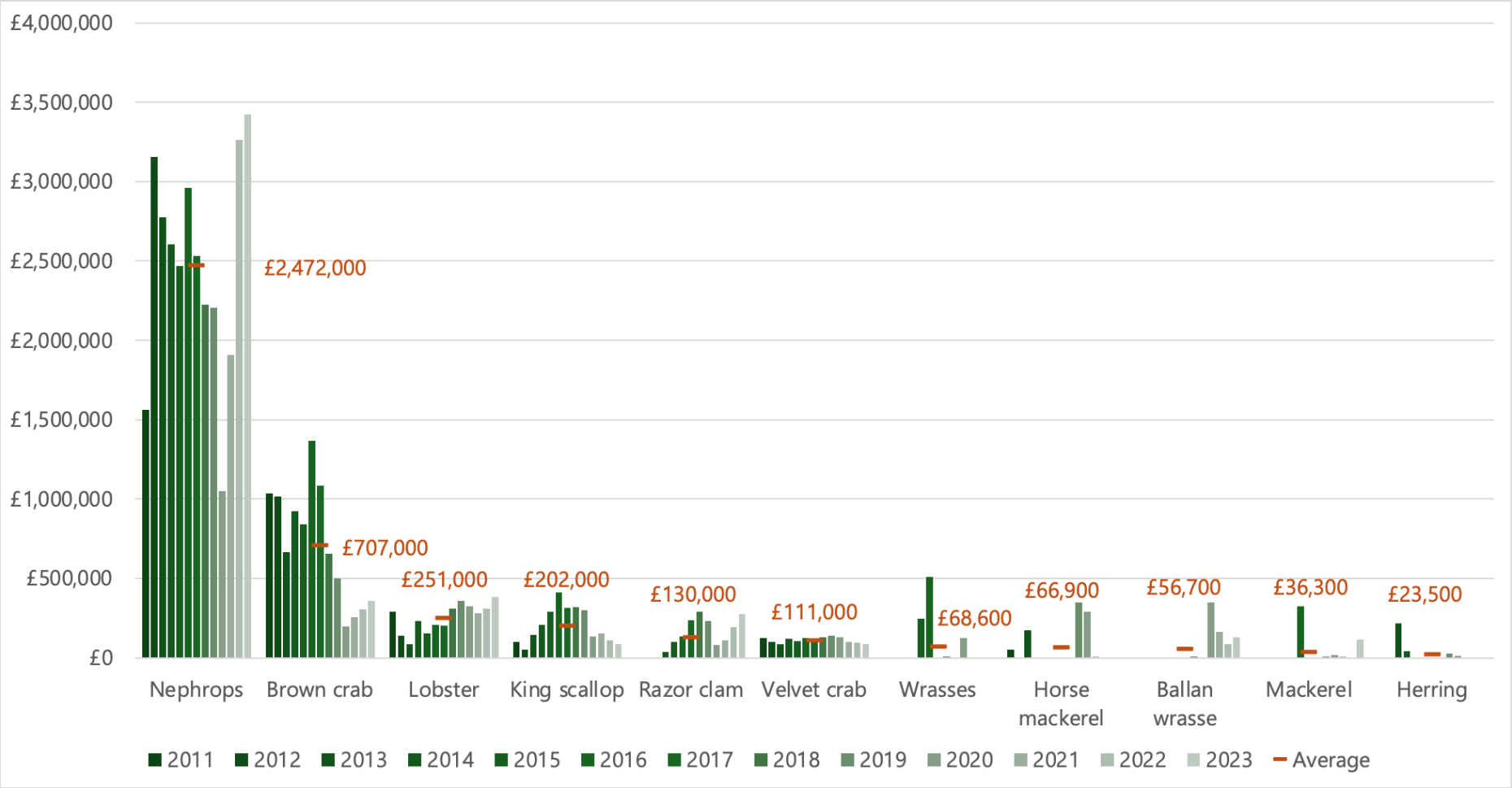


Plate 6-2: Key Species by annual landed weight (tonnes) (2011 to 2023) from the commercial fisheries local study area (MMO, 2022a; MMO, 2024a

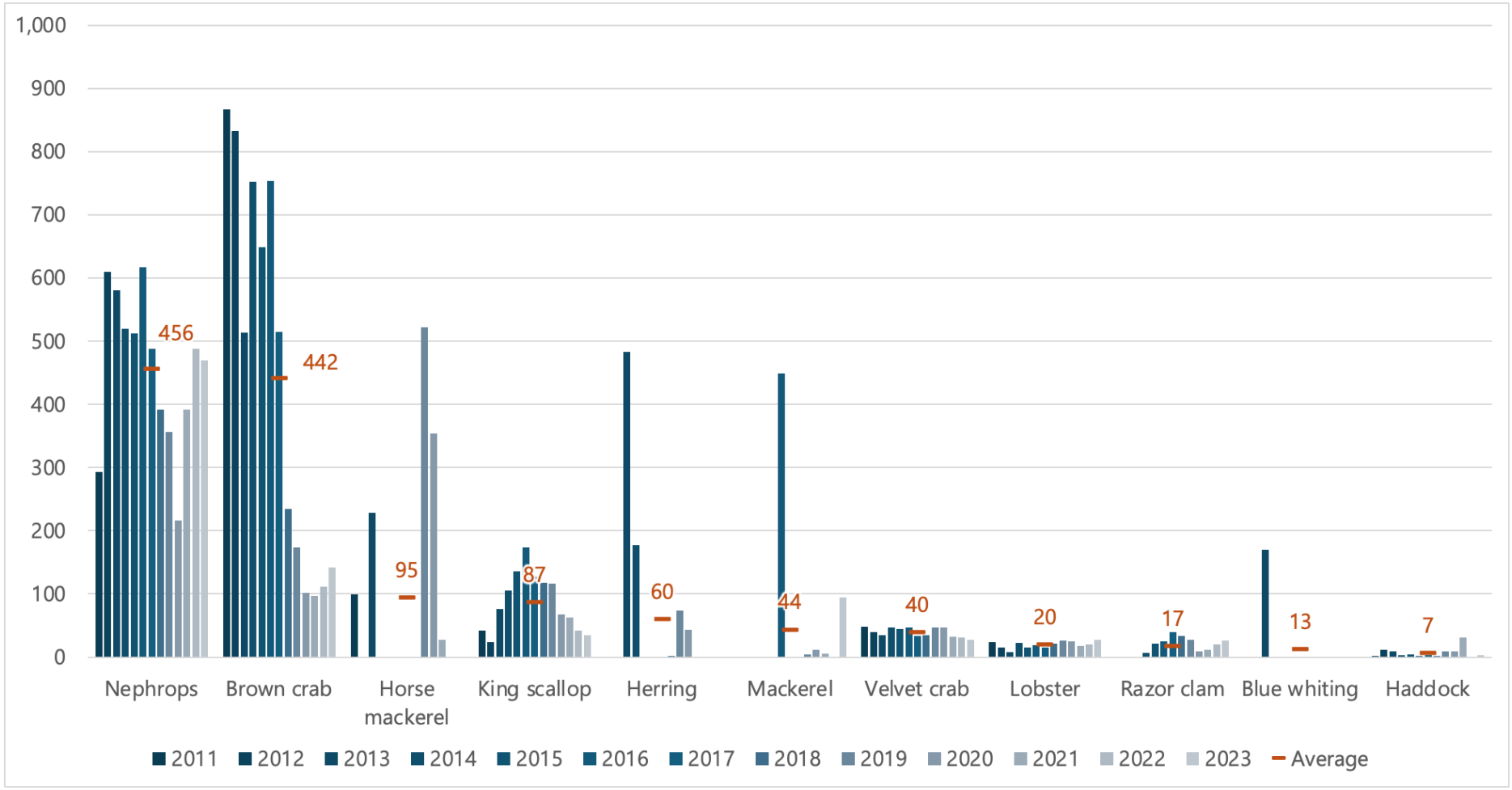


Plate 6-3: Annual landed value (GBP) (2011 to 2023) by vessel nationality from the commercial fisheries local study area (MMO, 2022a; MMO, 2024a)

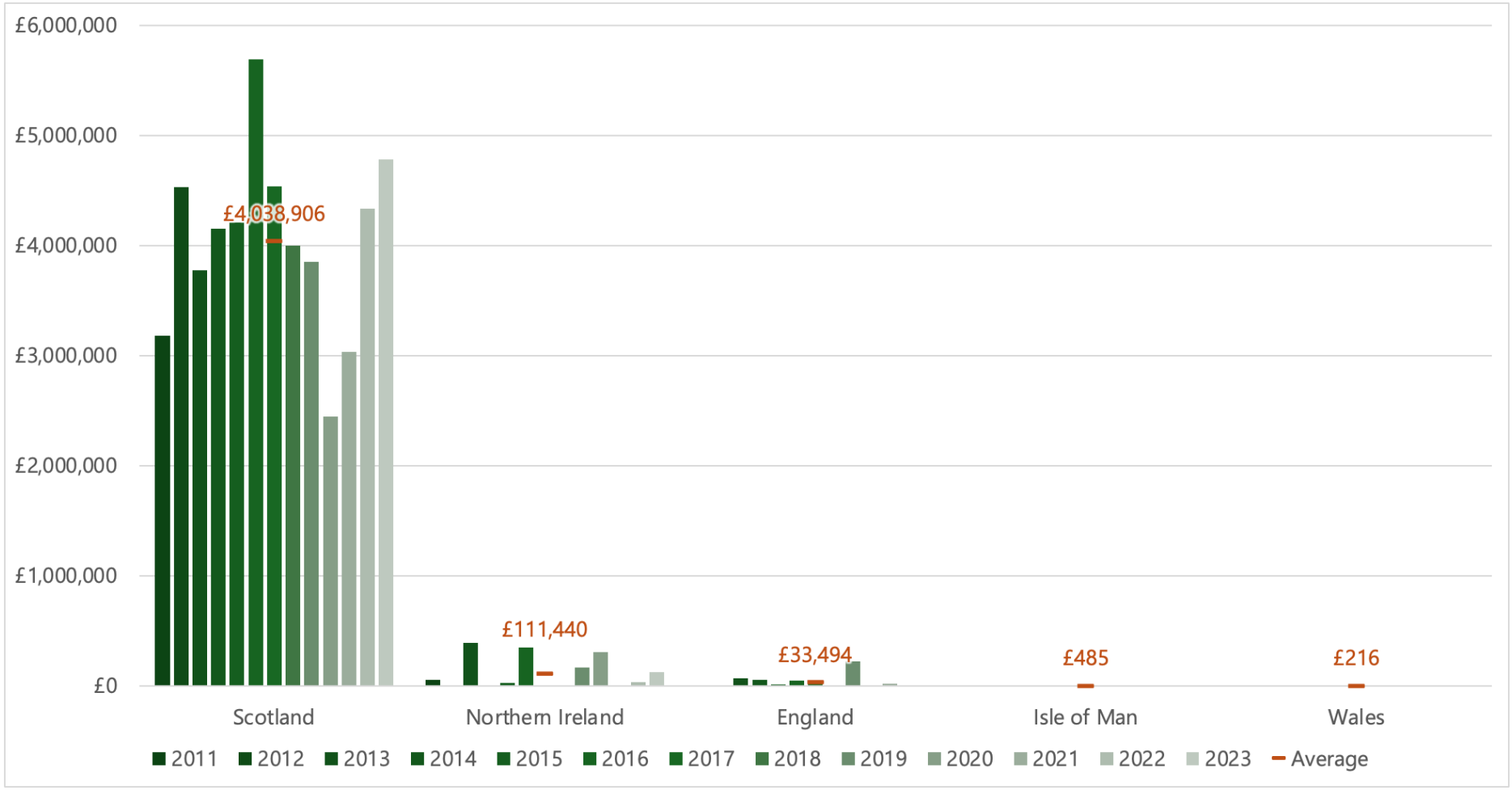


Plate 6-4: Annual landed value (GBP) (2011 to 2023) from the commercial fisheries local study area indicating average annual values from 2011-2013, 2014-2018 and 2019-2023 (MMO, 2022a; MMO, 2024a)

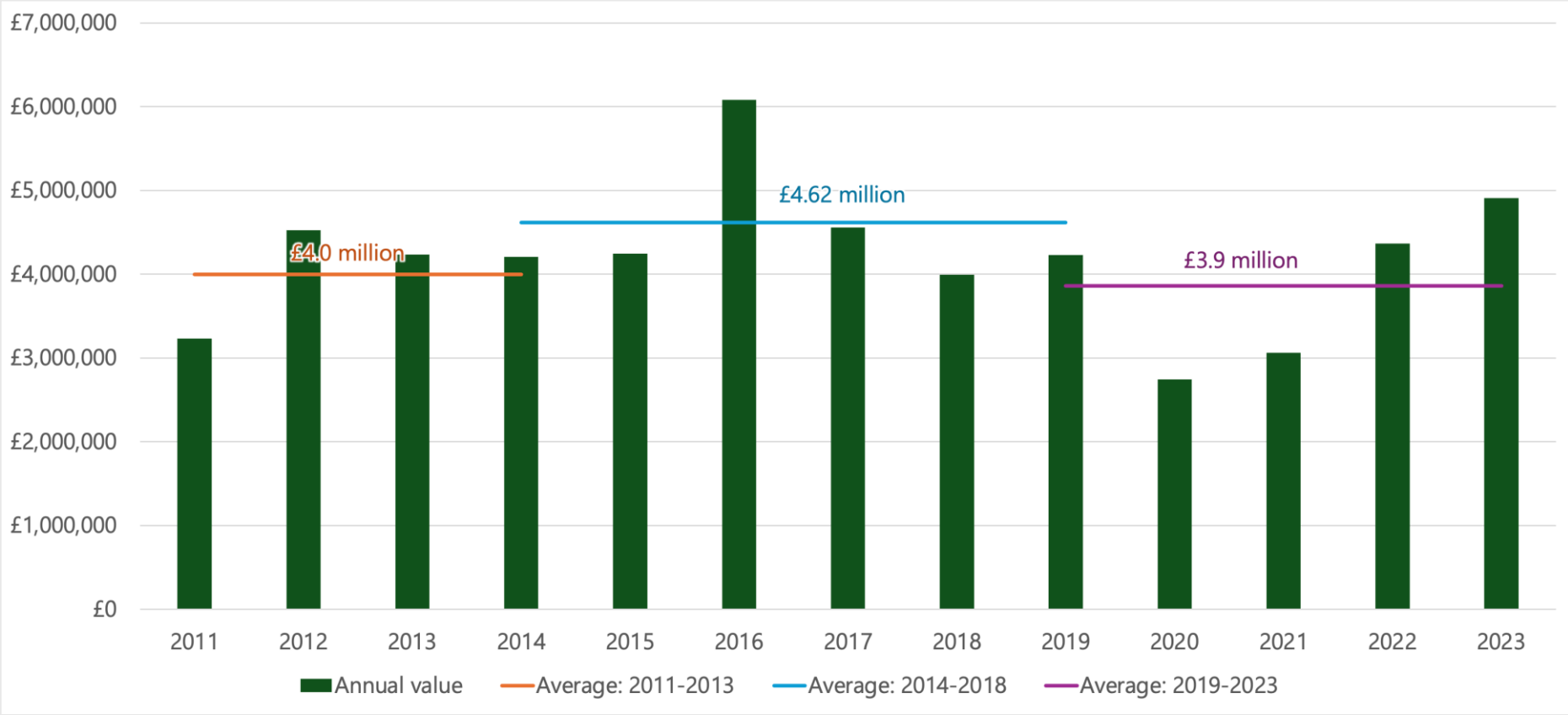


Plate 6-5: Annual landed value (GBP) (2011 to 2023) from the commercial fisheries local study area by gear type (MMO, 2022a; MMO, 2004a)

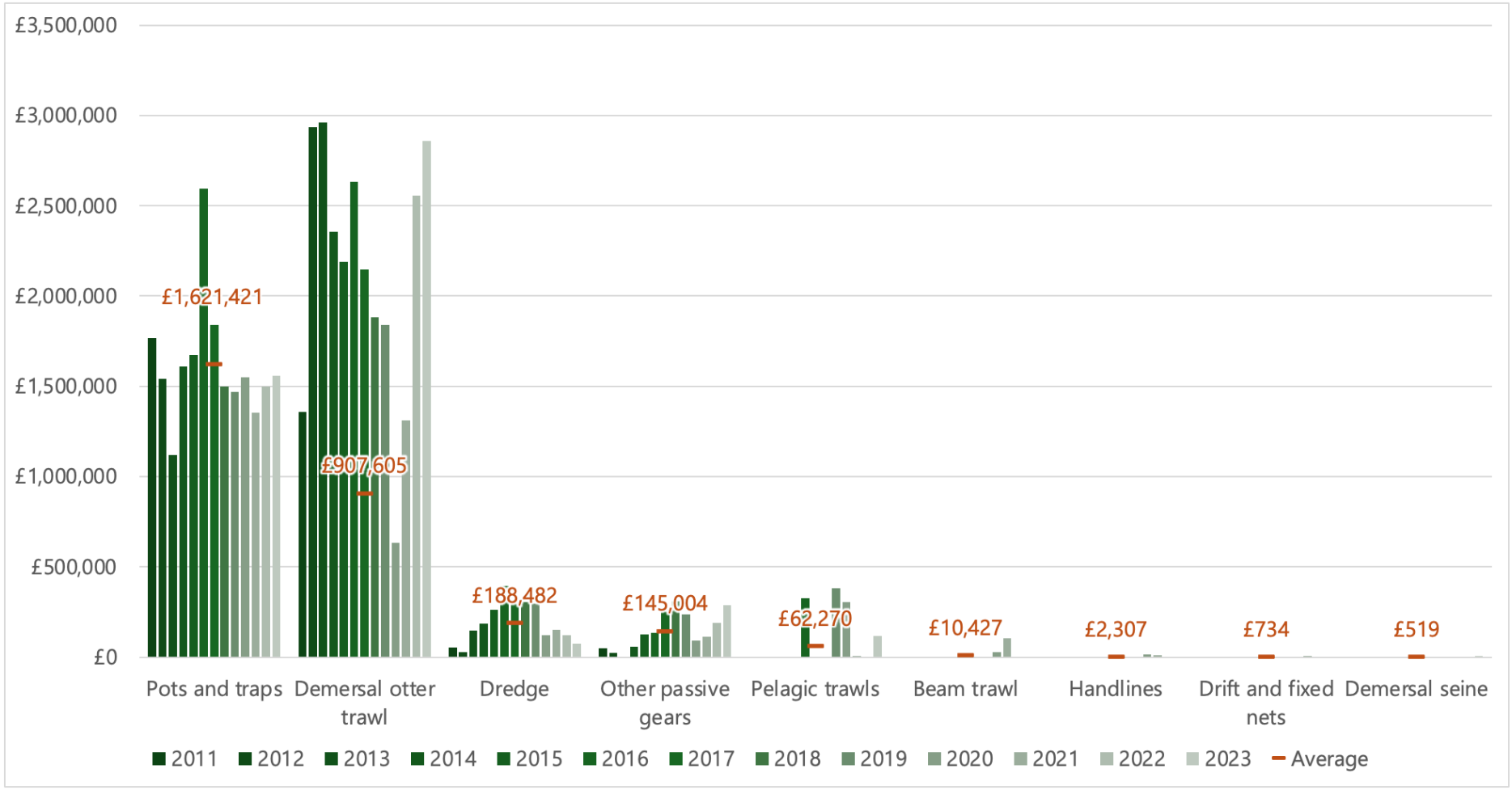


Plate 6-6: Annual landed value (GBP) (2011 to 2023) from the commercial fisheries local study area by pots, traps and creels by species (MMO, 2022a; MMO, 2024a)

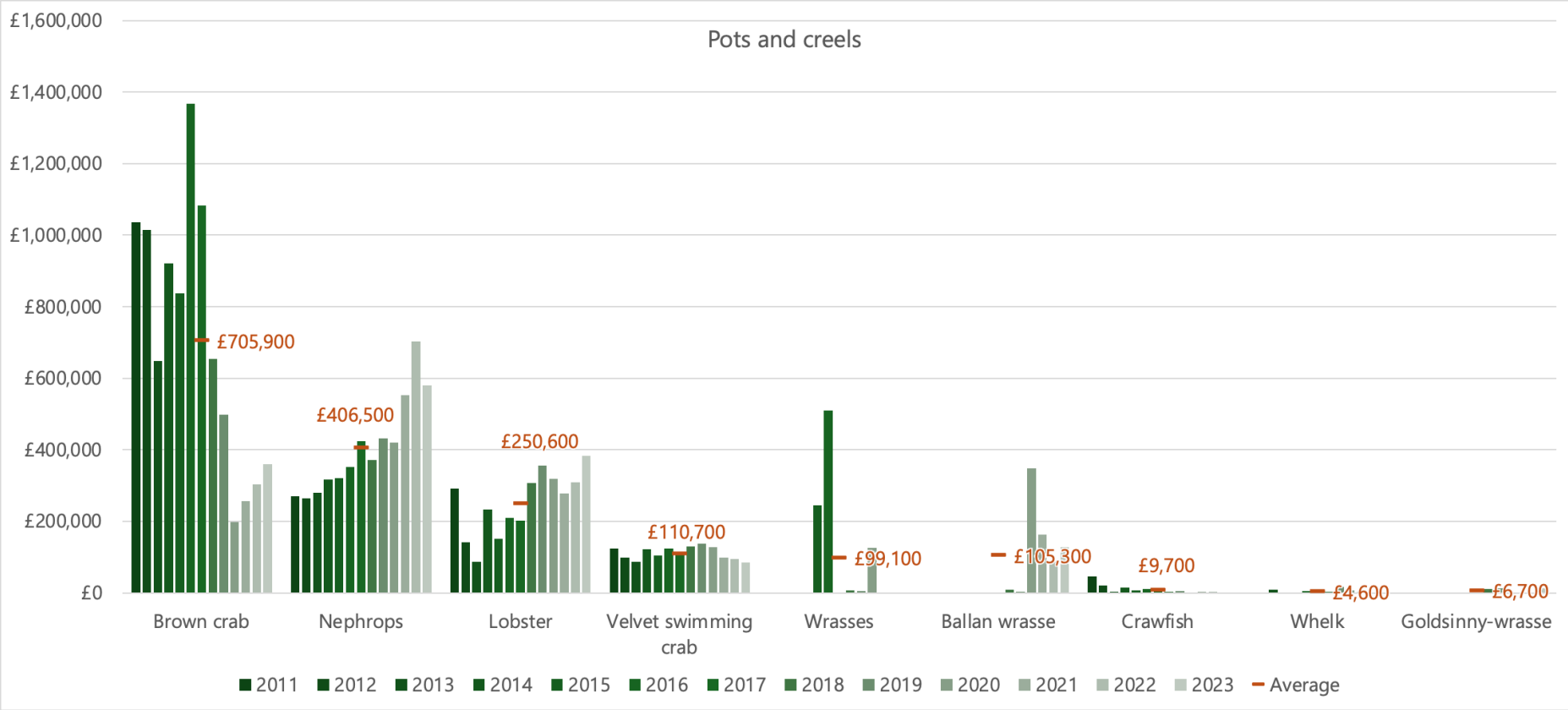
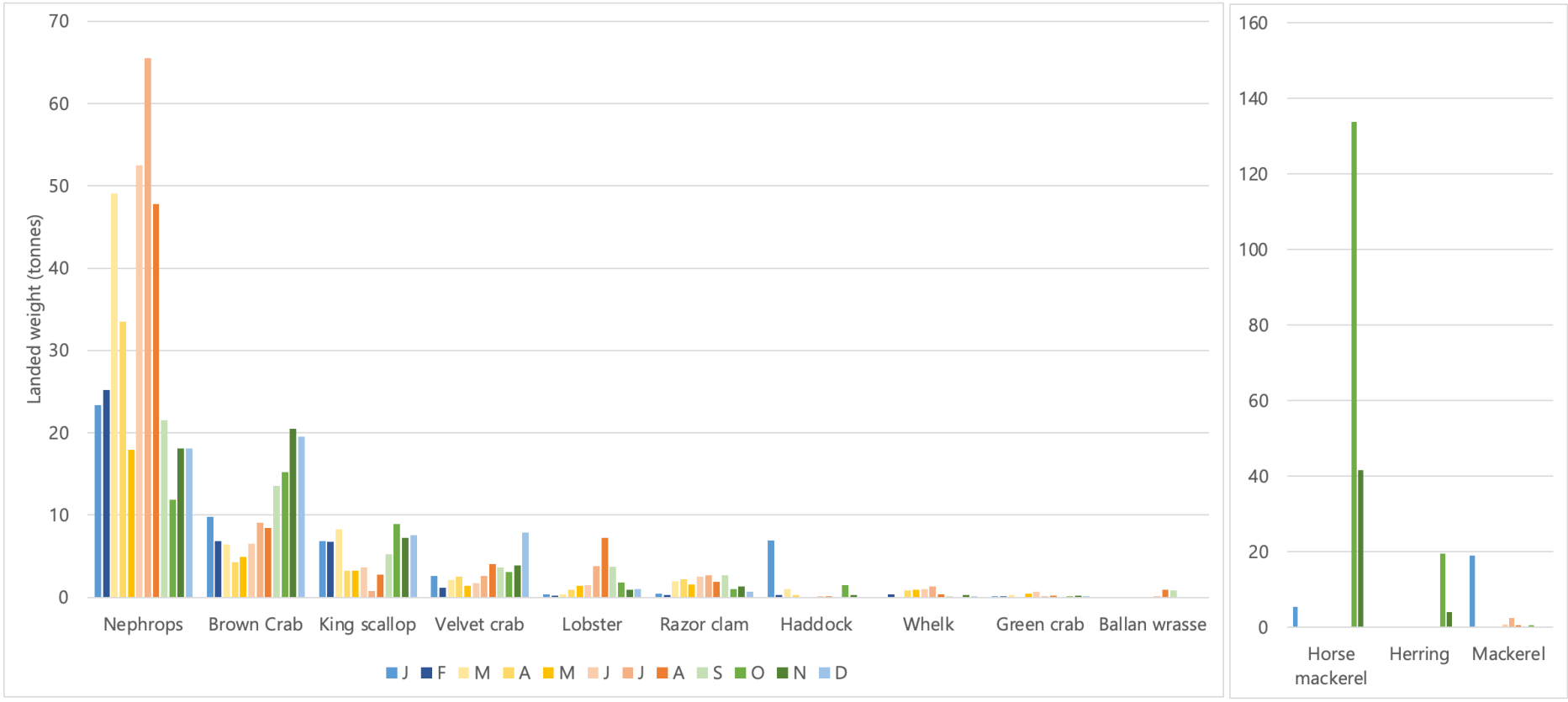


Plate 6-7: Average monthly landed value (GBP) (2019 to 2023) by species from the commercial fisheries local study area [Noting that Winter months are shown in shades of blue for December, January and February; Spring months are shown in shades of yellow for March, April and May; Summer months are shown in shades of orange for June, July and August; and Autumn months are shown in shades of green for September, October and November] (MMO, 2022a; MMO, 2024a)



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6.1.2 LANDINGS BY PORT

6.1.2.1 Commercial Fisheries landings from the local study area by port of landing are depicted in **Plate 6-8** per annum from 2019 to 2023, and in **Plate 6-9** showing the average annual landed value by port and species. The highest value is landed into Stornoway/*Steòrnabhagh*, and this is primarily the nephrops targeted fishery on the east of the Isle of Lewis/*Eilean Leòdhais*, and notable king scallop landings into Stornoway/*Steòrnabhagh*.

6.1.2.2 The second highest value of landings is made into Back/*Am Bac*, also located on the east coast of the Isle of Lewis/*Eilean Leòdhais*, with key species of nephrops and razor clam.

6.1.2.3 The port most local to the Offshore Project is Carloway/*Càrlabhagh*, which has the third highest value of landings from the local study area (45E3). Based on this data from 2019-2023, the key species landed into Carloway/*Càrlabhagh* is lobster, with smaller quantities of brown crab.

6.1.2.4 Landings into Carloway/*Càrlabhagh* in 2023 are depicted in **Plate 6-10** indicating the seasonality of catches by species. The large majority of catches into Carloway/*Càrlabhagh* are made from June to September during 2023.

Plate 6-8: Landed value (GBP) (2019 to 2023) from the commercial fisheries local study area by UK vessels indicating the port of landing (MMO, 2024a)

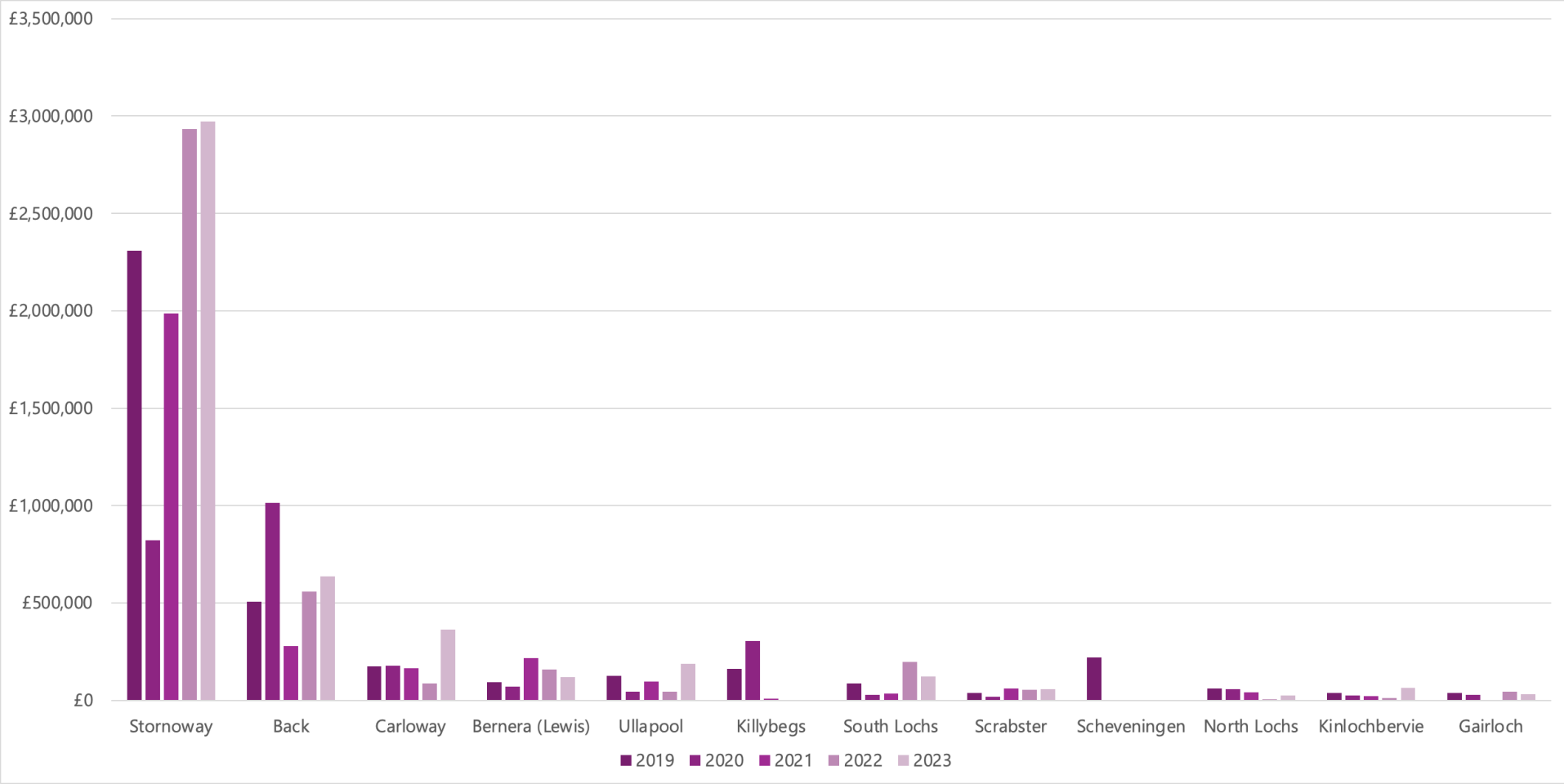


Plate 6-9: Average annual landed value (GBP) (2019 to 2023) from the commercial fisheries local study area by UK vessels indicating the port of landing and species (MMO, 2024a)

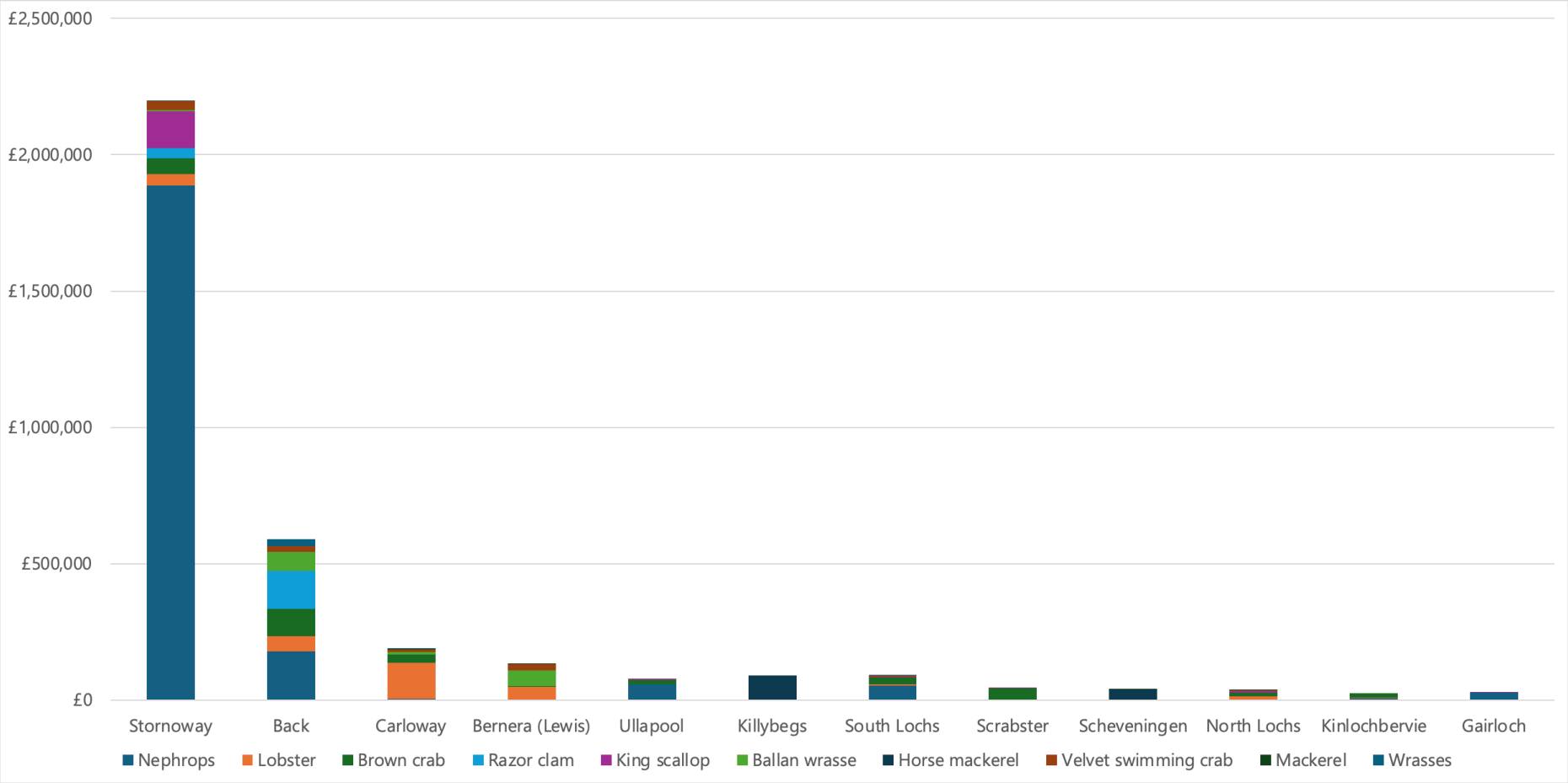
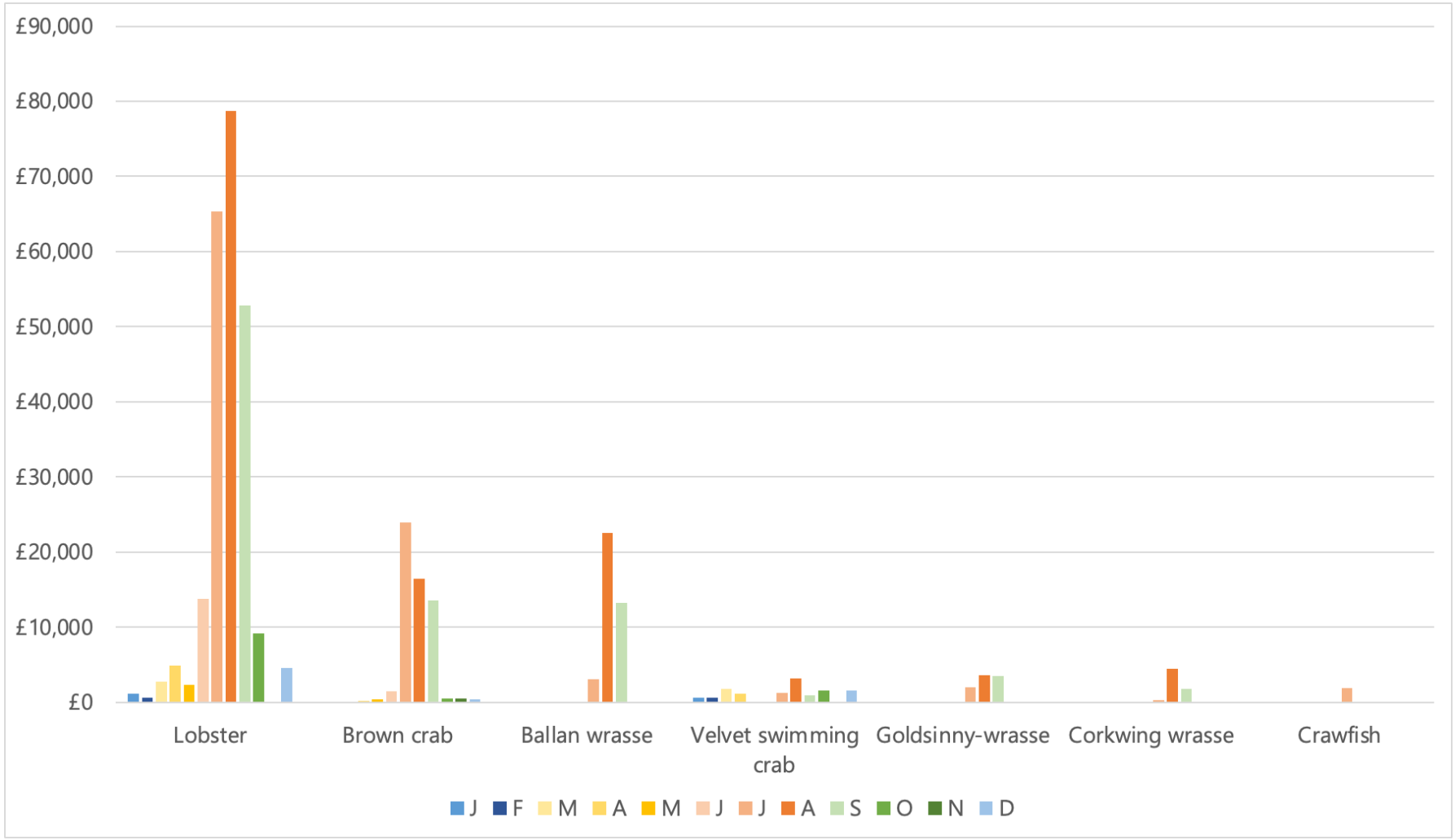


Plate 6-10: Landed value (GBP) in 2023 from the commercial fisheries local study area by UK vessels into Carloway indicating species and month (MMO, 2024a)



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6.2 COMMERCIAL FISHERIES REGIONAL STUDY AREA

6.2.1.1 Commercial Fisheries statistics presenting data for the annual (2011-2023) first sale value and landed weight by UK vessels from the Commercial Fisheries regional study area (4 ICES rectangles) are shown in **Plate 6-11** and **Plate 6-12** respectively. Average annual values are calculated across this 13-year period (2011 to 2023).

6.2.1.2 The statistics indicate that within this wider Commercial Fisheries regional study area, landings are dominated by mackerel by value and weight. The region is clearly associated with a pelagic trawl fishery targeting this migratory pelagic shoaling species. Significant peaks in mackerel landings are noted in 2016 (£36 million) and 2013 (£28 million).

6.2.1.3 Other species caught from the regional study area are similar to those in the local study area: nephrops, brown crab, lobster, and king scallop. Other species caught in higher quantities in the regional study area compared to the local study area include monkfish, haddock, megrim, horse mackerel, and squid.

6.2.1.4 Landings are predominately made by Scottish vessels (**Plate 6-13**), operating demersal otter trawl, pelagic trawl and potting gear (**Plate 6-14**).

6.2.1.5 Fishing vessel landings first sales value by ICES rectangle across the commercial fisheries regional study area are shown in **Plate 6-15** for vessel nationality and **Plate 6-16** for gear type; with data included for all UK vessels landing into UK and non-UK ports and non-UK vessel landings into UK ports.

6.2.1.6 Regionally, the average annual value of the 4 ICES rectangles in the regional study area are:

- 46E2 with a £6.8 million average annual value (located northwest of the array area);
- 45E3 with a £3.9 million average annual value (which overlaps the array area);
- 46E3 with a £3.5 million average annual value (north of the array area);
- 45E2 with a £480,000 average annual value (located west of the array area).

6.2.1.7 The seasonality of landings across the Commercial Fisheries regional study area for key species are depicted in **Plate 6-17**. Haddock are targeted throughout the year, with peaks during winter months. Brown crab catches are also throughout the year, and are highest during autumn and winter. Monkfish peak in spring and late autumn/winter, while nephrops have a marked peak in summer months. Mackerel are caught in February and blue whiting in April and May.

Plate 6-11: Key species by annual landed value (GBP) (2011 to 2023) by UK vessels from the commercial fisheries regional study area, note different scale for mackerel (MMO, 2022a; MMO, 2024a)

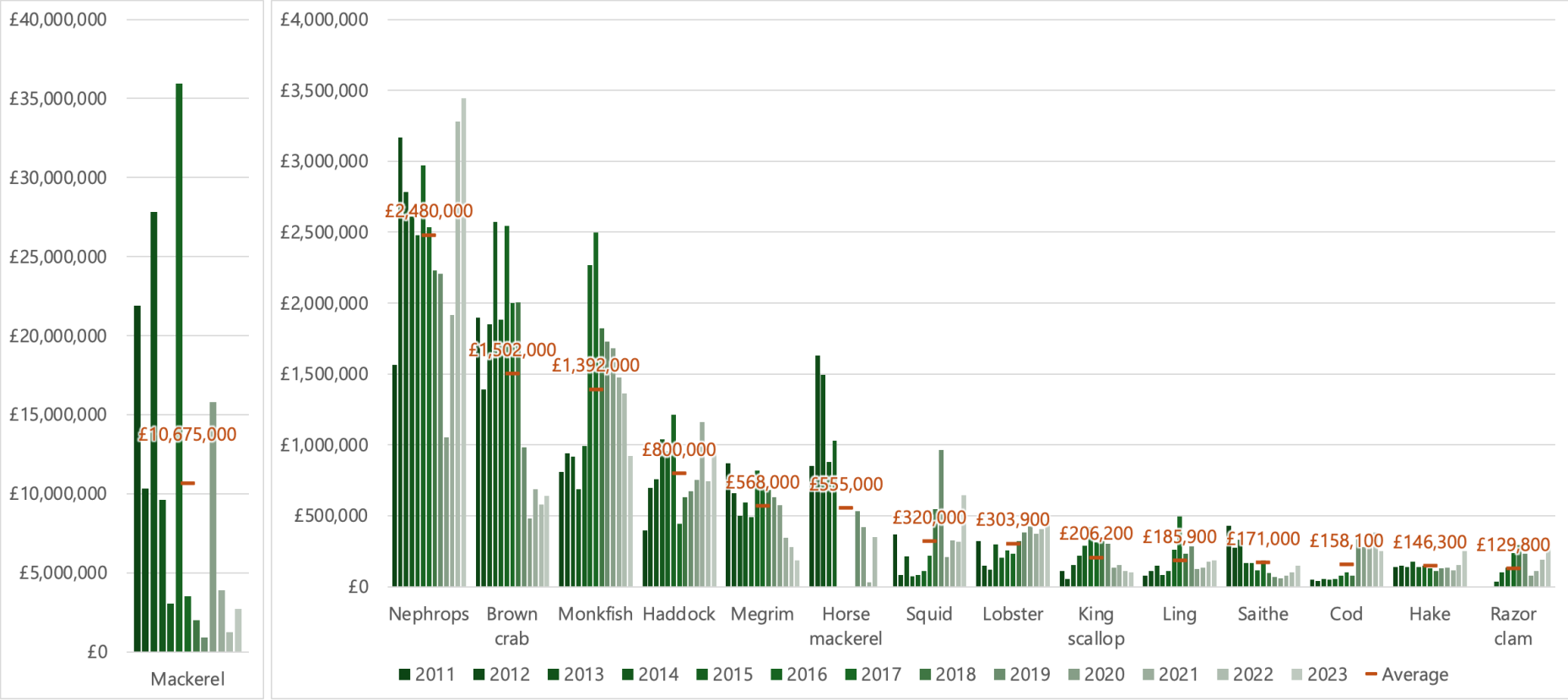


Plate 6-12: Key species by annual landed weight (tonnes) (2011 to 2023) by UK vessels from the commercial fisheries regional study area, note different scale for mackerel (MMO, 2022a; MMO, 2024a)

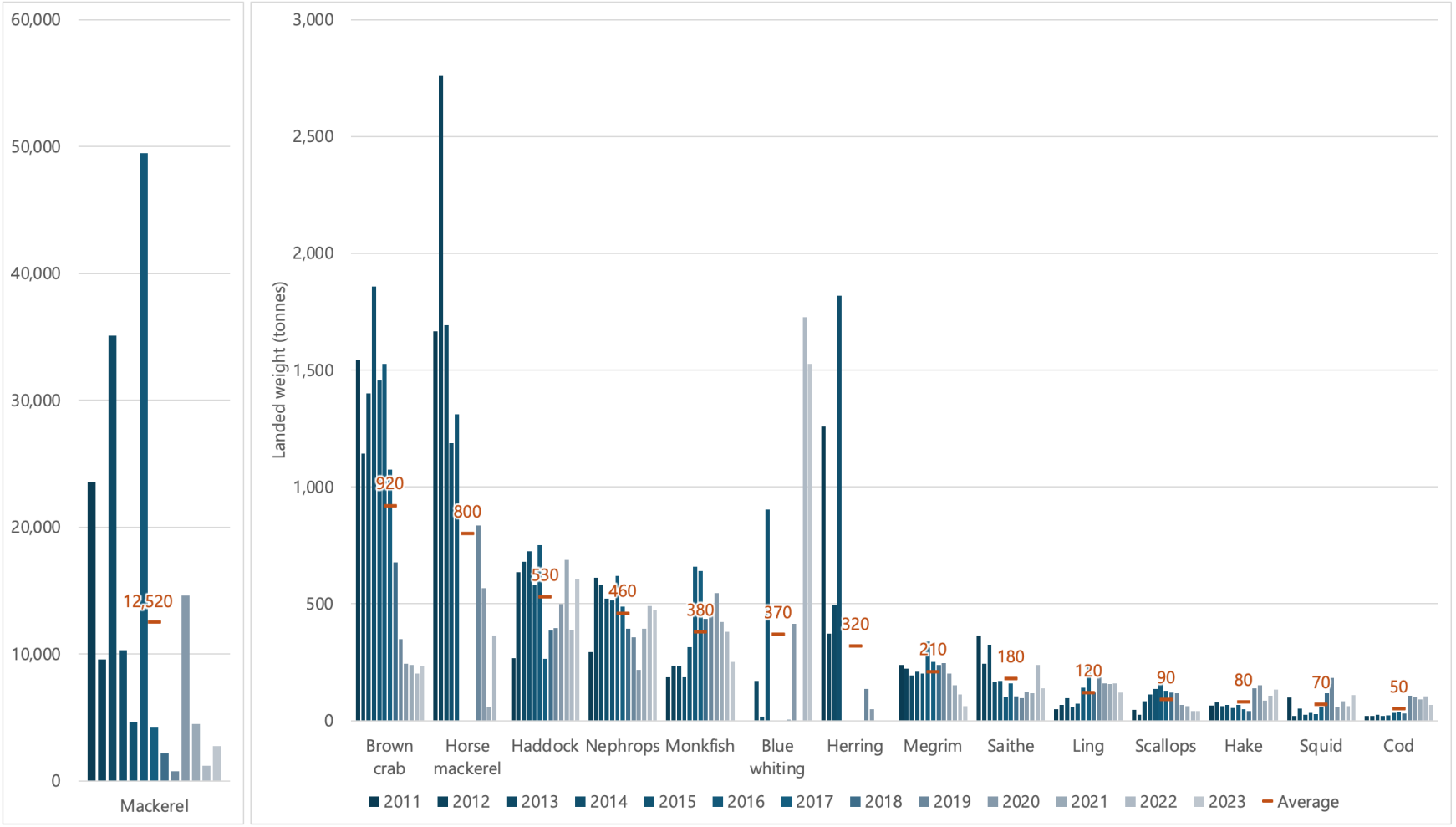


Plate 6-13: Annual landed value (GBP) (2011 to 2023) by vessel nationality from the commercial fisheries regional study area (MMO, 2022a; MMO, 2024a) [Data includes all UK vessels landing into UK and non-UK ports and non-UK vessel landings into UK ports]

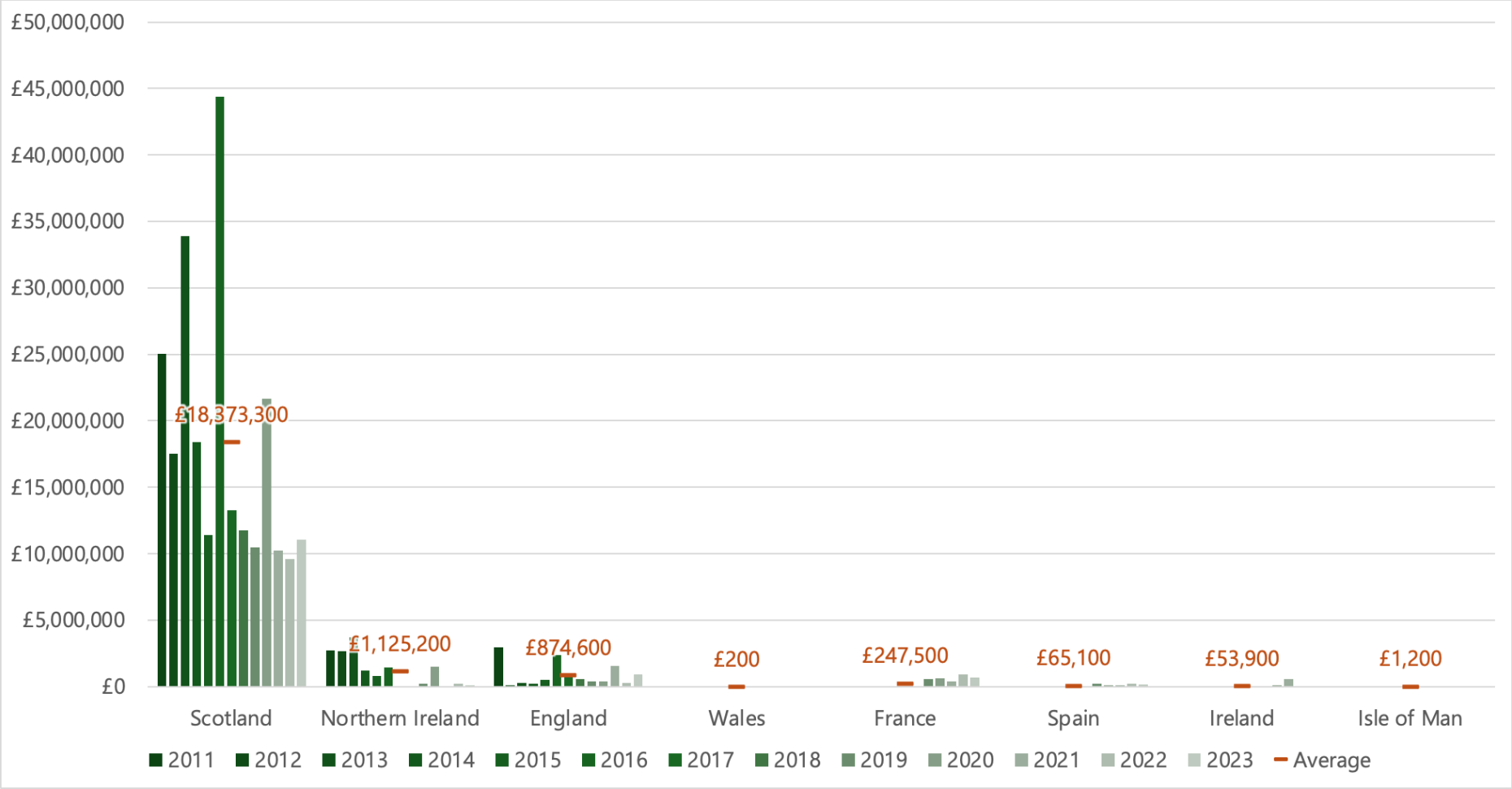


Plate 6-14: Average annual landed value (GBP) (2019 to 2023) by gear type and vessel nationality from the commercial fisheries regional study area (MMO, 2022a; MMO, 2024a). [Data includes all UK vessels landing into UK and non-UK ports and non-UK vessel landings into UK ports]

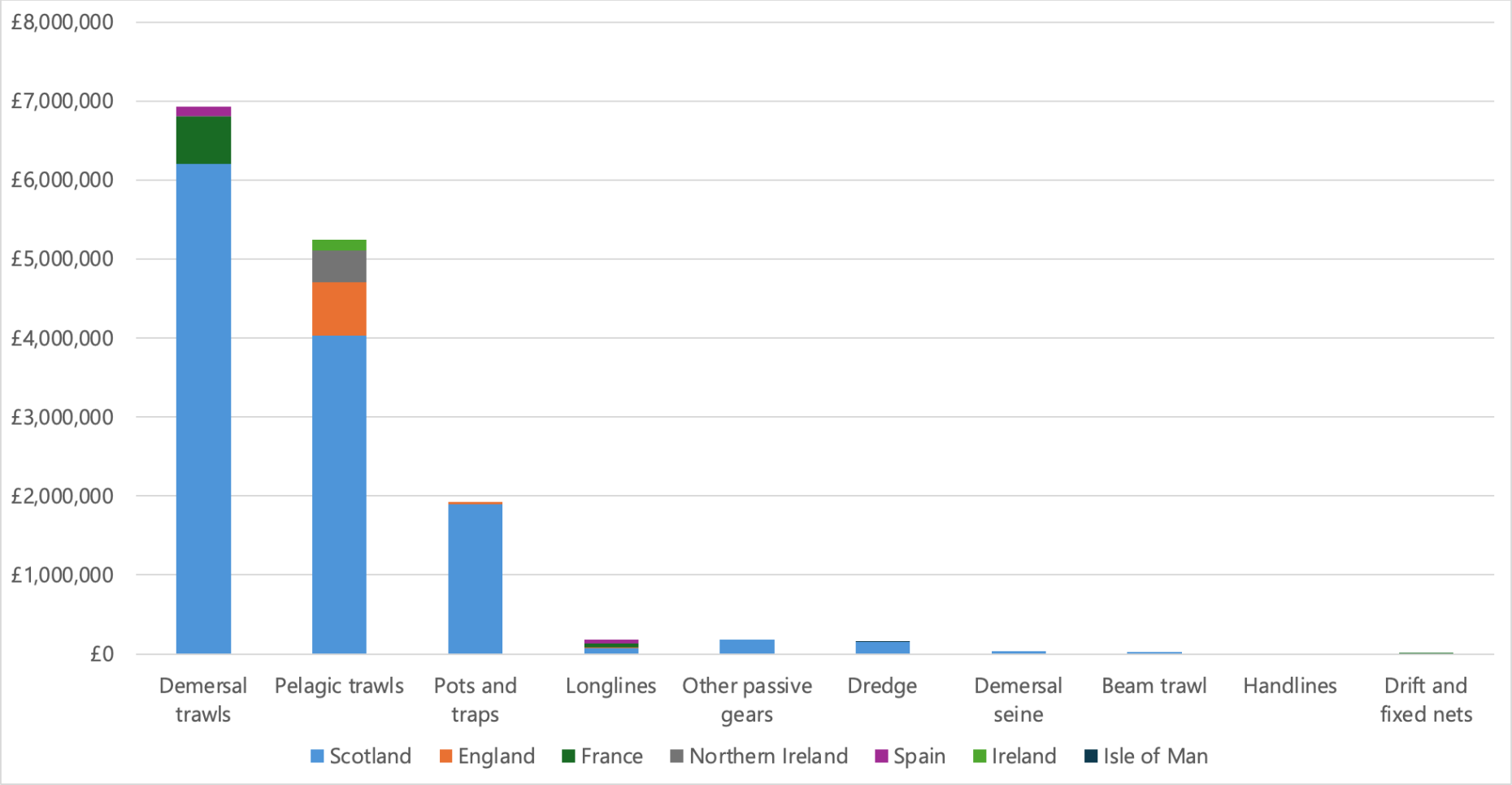


Plate 6-15: Average annual landed value (GBP) (2019 to 2023) by ICES rectangle from the commercial fisheries regional study area indicating vessel nationality (MMO, 2022a; MMO, 2024a). [Data includes all UK vessels landing into UK and non-UK ports and non-UK vessel landings into UK ports]

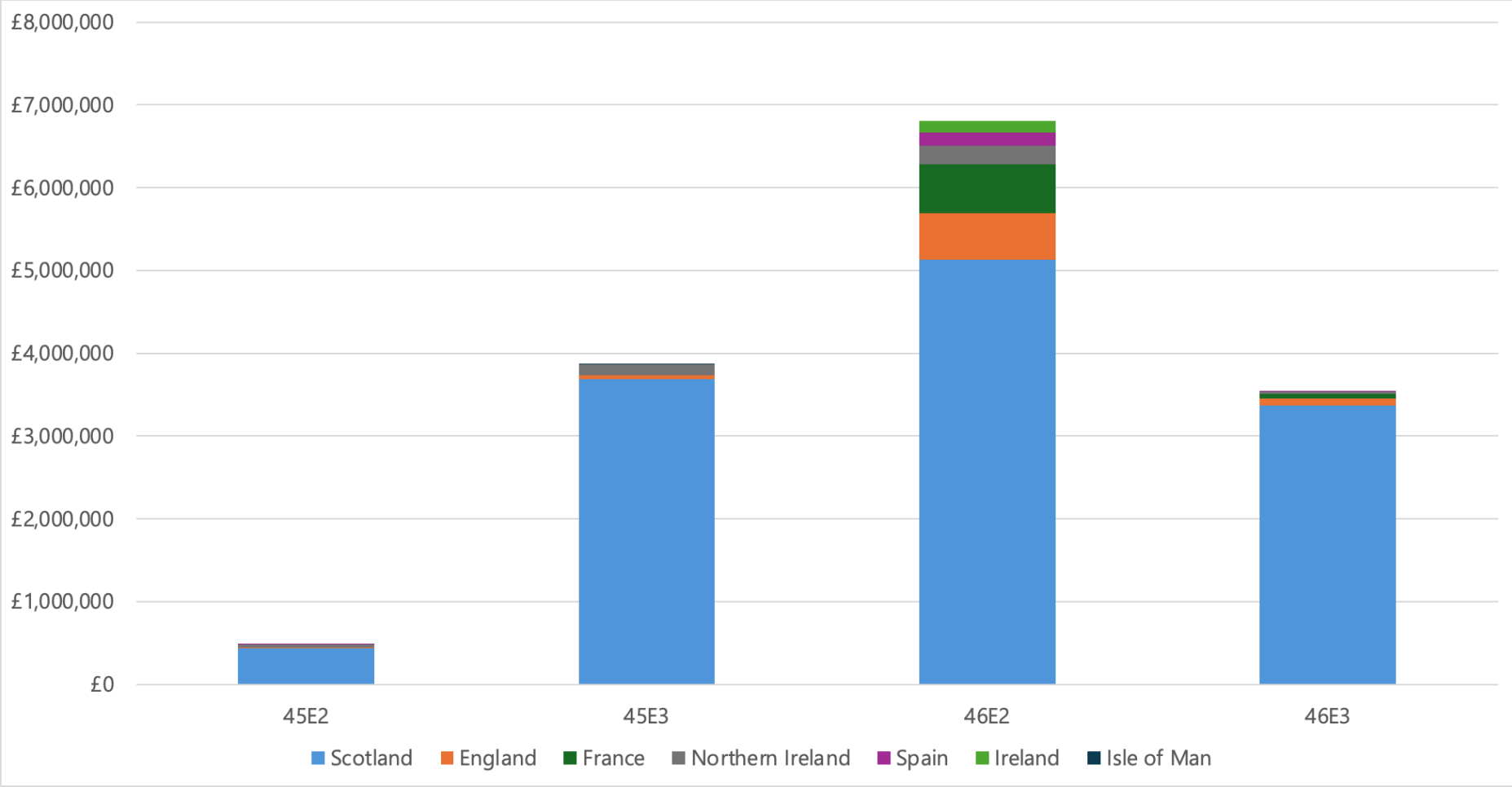


Plate 6-16: Average annual landed weight (tonnes) (2019 to 2023) by ICES rectangle from the commercial fisheries regional study area indicating gear type (MMO, 2022a; MMO, 2024a). [Data includes all UK vessels landing into UK and non-UK ports and non-UK vessel landings into UK ports]

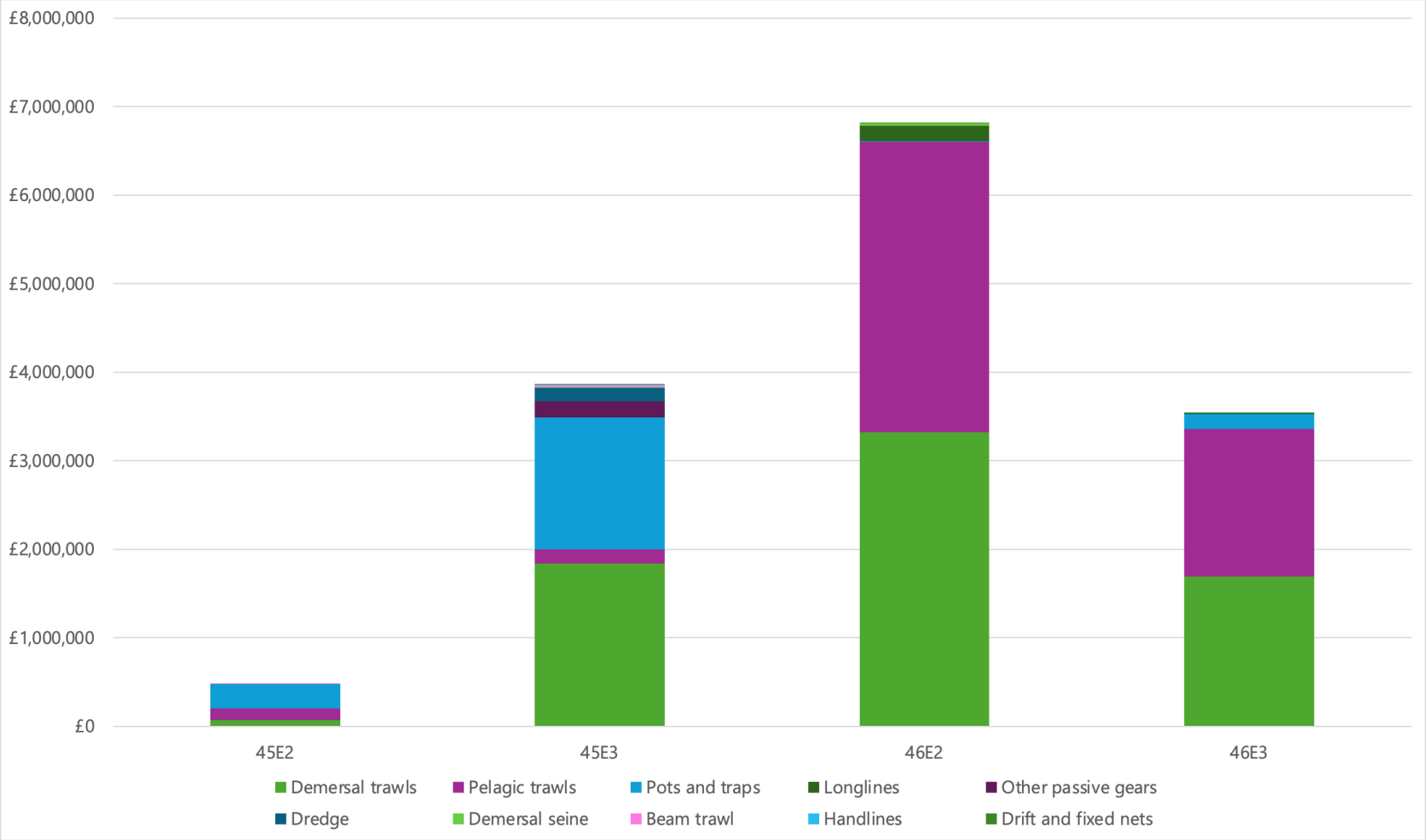
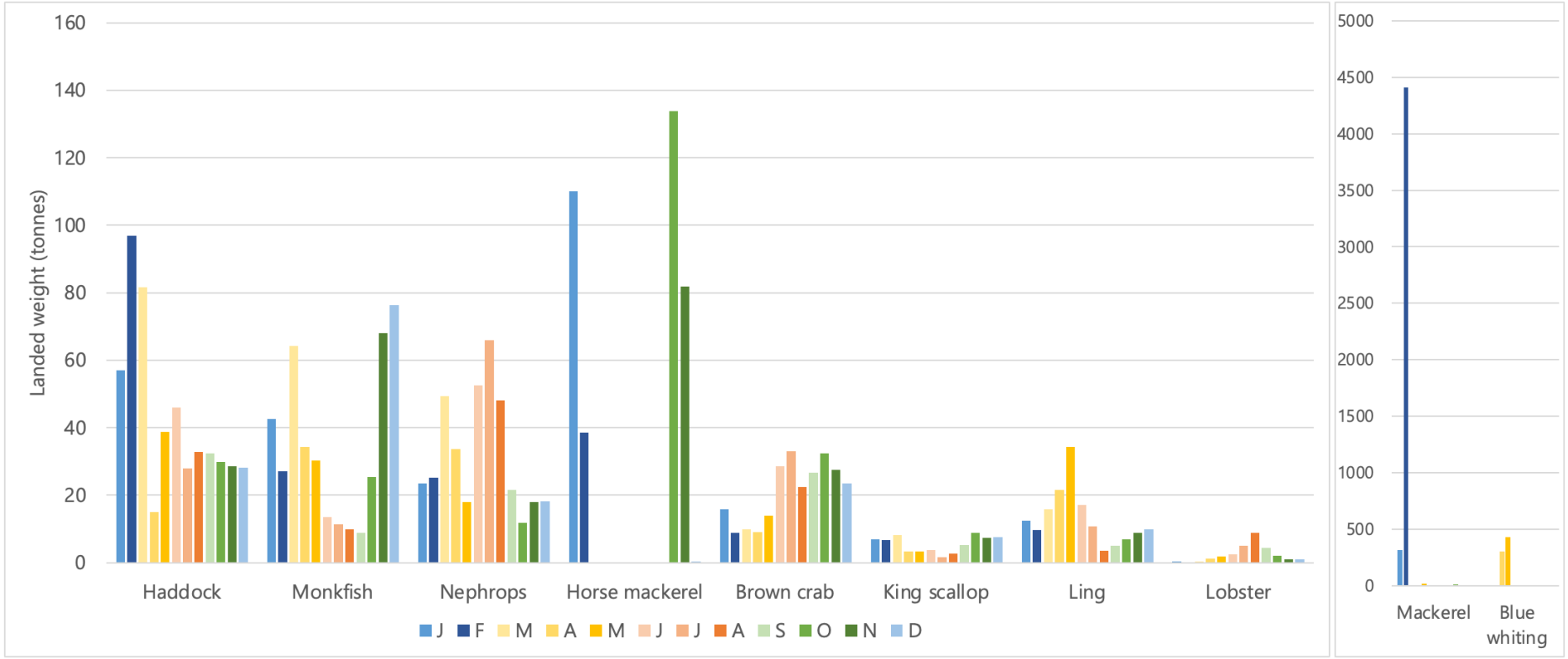


Plate 6-17: Average monthly landed value (GBP) (2019 to 2023) by species from the commercial fisheries regional study area (MMO, 2022a; MMO, 2024a). [Data includes all UK vessels landing into UK and non-UK ports and non-UK vessel landings into UK ports]



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7 SPATIAL FISHING ACTIVITY

7.1 FISHING INTENSITY BASED ON VMS DATA

7.1.1.1 This section presents the spatial mapping data and information available to inform the location and intensity of fishing across the Commercial Fisheries regional study area, and at a wider spatial scale as available.

7.1.1.2 VMS data has been obtained from 5 different sources, with varying details as follows:

- Marine Directorate Scottish vessel VMS data sourced from the NMPi data catalogue indicating fishery effort data by gear type;
- MMO VMS data displaying the first sales value (£) of catches and covers UK registered vessels 15 m and over in length from 2016 to 2020;
- ICES VMS data displays the surface SAR of catches by different gear types and covers EU (including UK) registered vessels 12 m and over in length. Surface SAR indicates the number of times in an annual period that a demersal fishing gear makes contact with (or sweeps) the seabed surface. Surface SAR provides a proxy for fishing intensity and has been analysed to determine an average annual SAR based on data from 2016 to 2020;
- Scottish Pelagic Fishermen's Association (SPFA) VMS data for their Scottish pelagic trawl member vessels for 2013 to 2021.

7.1.1.3 Activity of Scottish vessels under 12 m in length operating potting gear is depicted in **Plate 7-1**. This data is redacted (i.e., greyed out) where the information is amalgamated for fewer than 5 vessels. Unfortunately, this has resulted in most of the data being redacted, so the value cannot be determined. It does, however, confirm that potting activity occurs across the majority of the Offshore Project, particularly the southwest half of the Array Area and the OCAS. Potting VMS data for fishing activity by vessels 15 m and over is depicted in **Plate 7-2** for 2020 and **Plate 7-3** for 2016-2019, indicating activity by 15 m and over vessels recorded across the Offshore Project in 2016, 2017, and 2018. Potting vessels are typically smaller than 15 m in length and therefore not represented within the VMS dataset analysed. The Array Area is located in grounds that is within the normal operational range of inshore potting vessels.

7.1.1.4 Distribution of crab and lobster fisheries based on older datasets of amalgamated VMS intensity for the period 2009-2013 is shown in **Plate 7-4** and **Plate 7-5** respectively. This illustrates high intensity crab fisheries across the Array Area, and low level lobster activities across the OCAS.

7.1.1.5 Industry mapping of key potting grounds, based on plotter data is presented **Plate 7-6**, which shows activity across the Array Area and OCAS.

7.1.1.6 Demersal otter trawl activity is depicted in **Plate 7-7** to **Plate 7-12**, indicating very limited overlap with the Offshore Project. Within the local study area, all of the demersal otter trawl activity is

located on the east side of the Isle of Lewis/*Eilean Leòdhais* in a Neprhops targeted fishery. In the regional study area, an important deep-water demersal trawl fishery is evident, following deep-water trench to target haddock, monkfish, and mixed whitefish species. A regional squid fishery is also evidence (**Plate 7-12**), outside and to the north of the Offshore Project.

7.1.1.7 Demersal seine activity is depicted in **Plate 7-13** to **Plate 7-15** which shows very low levels of activity across the regional study area.

7.1.1.8 Dredge activity is depicted **Plate 7-16** to **Plate 7-19** indicating no activity by this gear type across the Offshore Project. Within the local study area, all dredge fishing grounds are located on the east of the Isle of Lewis/*Eilean Leòdhais*. Scallop fishing intensity based on VMS data from 2009-2013 corroborates that there has been no historic scallop dredge fishery targeted on the west of the Isle of Lewis/*Eilean Leòdhais*, within the local study area (**Plate 7-20**).

7.1.1.9 Beam trawl activity is depicted in **Plate 7-21** indicating negligible activity across the Offshore Project, and Commercial Fisheries local and regional study areas.

7.1.1.10 Pelagic trawl activity is depicted in **Plate 7-22** for UK vessels based on VMS data sourced from the MMO for 2020 and in **Plate 7-23** for 2016-2019, together with VMS intensity records from 2009 to 2013 for herring in **Plate 7-24** and mackerel in **Plate 7-25**. The nature of pelagic trawling activity means that vessels track shoals of fish and deploy fishing gear to harvest a portion of that migrating shoal. This means activity is associated with the migration route of the shoaling fish which, in the case of herring, could be linked to spawning substrate. Fishing locations are therefore generally across a wider area and vary spatially on an annual basis. This fishery is highly season, with activity for approximately 8-12 weeks in the year.

7.1.1.11 Pelagic trawl VMS data sourced and provided by the SPFA for their Scottish pelagic trawl member vessels is depicted in **Plate 7-26** for active fishing operations and in **Plate 7-27** for all activity (transiting and fishing) presented cumulatively for the period 2013-2021. This indicates very occasional active fishing operations within the Array Area and transiting of pelagic trawl vessels through the Array Area in a north east to south west direction.

7.1.1.12 The value of catches by Scottish under 12 m vessels is presented in **Plate 7-28** for diving activity, **Plate 7-29** for rod and line or gears with hooks, and **Plate 7-30** for set net activity. The majority of the data is redacted due to coverage being less than 5 vessels, but it does indicate no activity across the Offshore Project by set nets and diving and some activity in the inshore area of the OCAS for rod and line fishing.

7.2 FISHING INTENSITY BASED ON AIS DATA

7.2.1.1 Fishing vessel route density, based on vessel AIS positional data, is shown in **Plate 7-31** for 2023, **Plate 7-32** for 2019-2022 and presented seasonally for 2022 in **Plate 7-33** depicting activity in spring, summer, autumn, and winter. AIS is required to be fitted on fishing vessels ≥15 m length.

The data is specific to fishing vessels and indicated the route density per square kilometre (km^2) per year. This data does not distinguish between transiting vessels and active fishing, but does provide a useful source to corroborate fishing grounds.

7.2.1.2 AIS data corroborates the very limited activity of fishing vessels across the array area for vessels fitted with AIS.

7.3 FISHING INTENSITY BASED ON MARINE TRAFFIC SURVEY DATA

7.3.1.1 Offshore Project-specific marine traffic surveys were undertaken from 18 July-14 August 2023 using AIS and radar tracking and visual observations to record vessel activity across the Array Area. In addition, AIS data across the entire 2023 period has been interrogated to inform a navigational risk assessment presented in **Appendix 16.1: Navigational Risk Assessment Technical Report (Volume 2c)**.

7.4 FISHING ACTIVITY BASED ON SCOUTING SURVEYS

7.4.1.1 Fisheries scouting surveys were undertaken to observe locations of potting gear based on marker buoys. Fisheries scouting surveys data is presented in **Plate 7-34**, indicating that potting activity is predominately located very close inshore, along the coast. Potting gear was recorded within the southern boundary of the OCAS and the west portion of the Turbine Area.

7.5 FISHING ACTIVITY BASED ON FISHERIES SENSITIVITY MAPPING AND DISPLACEMENT MODELLING

7.5.1.1 The Fisheries Sensitivity Mapping and Displacement Modelling (FiSMaDiM) project has been funded by The Crown Estate and led by Cefas, in collaboration with University of St Andrews and Scottish Government. It aimed to fill key evidence gaps, including identification of fishing activities at a high-spatial resolution in potential offshore wind farm areas and improvement of methods to estimate fishing intensity of fishing vessels in UK waters (Mendo *et.al.,* 2024).

7.5.1.2 The FiSMaDiM Public Web App was published in 2025 (Cefas, 2025), and the following mapping data, based on merged AIS and VMS data obtained from the MMO, has been obtained from the Public Web App:

- Demersal trawl fishing effort (**Plate 7-35**) and vessel numbers (**Plate 7-36**), indicating relatively low effort within the Array Area and OCAS, and relatively higher effort and activity to the north and north west of the Offshore Project;
- Demersal seine effort (**Plate 7-37**) and vessel numbers (**Plate 7-38**), indicating no effort within the Array Area and OCAS, and very low effort throughout the Commercial Fisheries regional study area;

- Dredge effort (**Plate 7-39**) and vessel numbers (**Plate 7-40**), indicating no effort within the Array Area and OCAS, and no effort on the west side of Lewis/*Eilean Leòdhais*. All dredge activity within the Commercial Fisheries regional study area is located to the east of Lewis/*Eilean Leòdhais*;
- Pelagic trawl effort (**Plate 7-41**) and vessel numbers (**Plate 7-42**), indicating no effort within the Array Area and OCAS, with activity located to the north west of the Offshore Project;
- Potting effort (**Plate 7-43**) and vessel numbers (**Plate 7-44**), indicating moderate-high effort within the Array Area and moderate-low effort in the OCAS. Within the Array Area and OCAS, 5 fishing vessels deploying pots are recorded as active, based on the FiSMaDiM data.

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Plate 7-1: Potting Average Annual Value Scottish Under 12 m Vessels (Data from 2017-2021) (Source: Marine Directorate, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

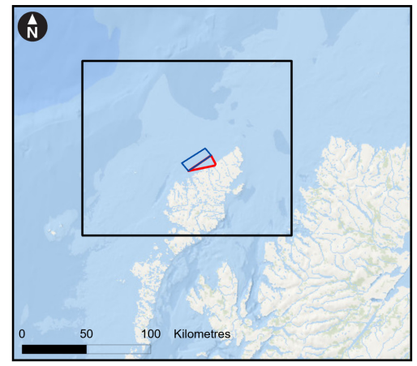
- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Potting under 12m, 2017-2021

Annual average value

- Under 5 vessels
- £0.01 - £2,000.00
- £2,000.01 - £5,000.00
- £5,000.01 - £20,000.00
- £20,000.01 - £50,000.00
- Greater than £50,000

Data source: Marine Directorate, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.1
Potting Average Annual Value Scottish Under 12m Vessels (Data from 2017-2021)

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.1	

Plate 7-2: Potting Vessel Monitoring System Data for UK vessels ≥ 15 m, 2020 (Source: MMO, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

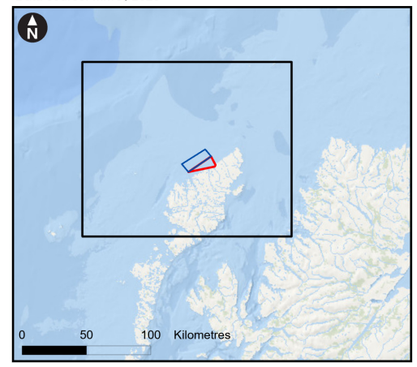
Potting 2020 (UK vessels ≥15m)

First Sales Value

Total value, £

- £0.01 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £145,000.00

Data source: MMO, 2023



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

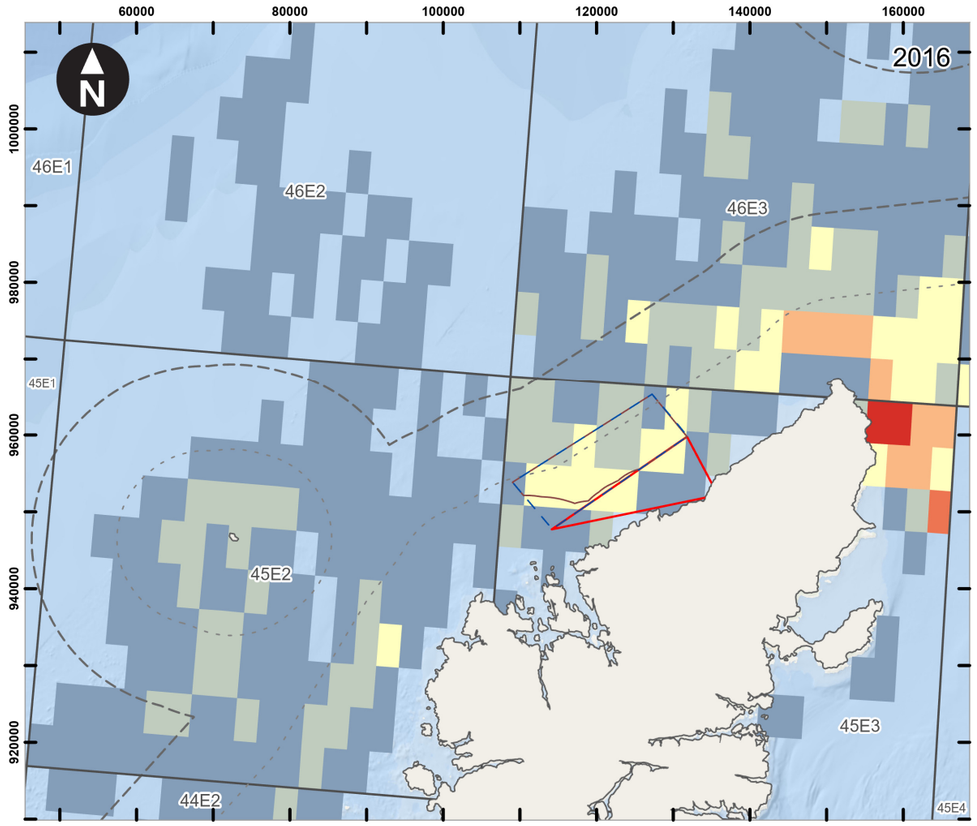
Drawn: FN Checked: SM Approved: LB

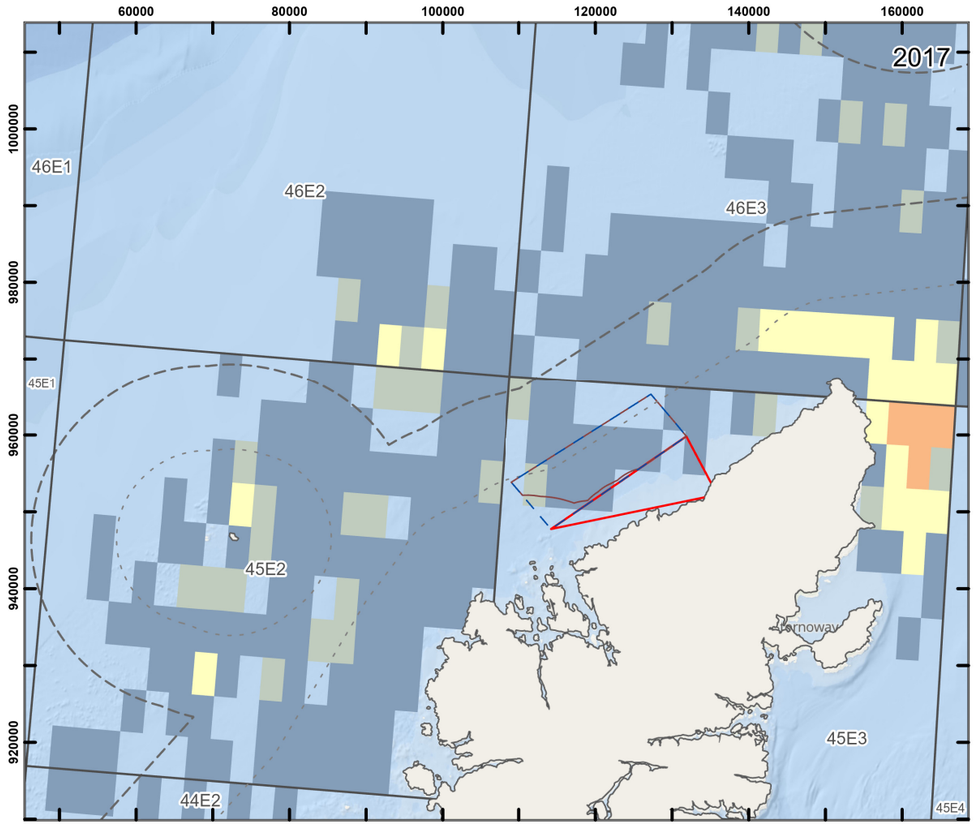
Spiorad na Mara Offshore Wind farm

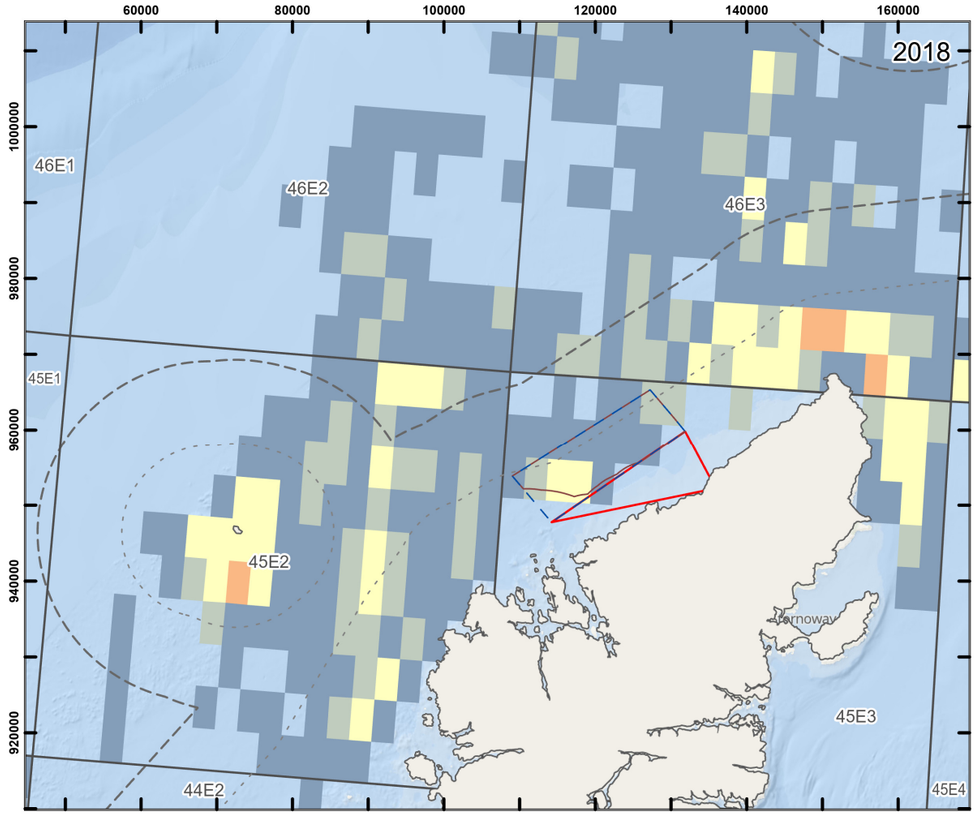
Figure 7.2
Potting Vessel Monitoring System
Data for UK vessels ≥15m, 2020

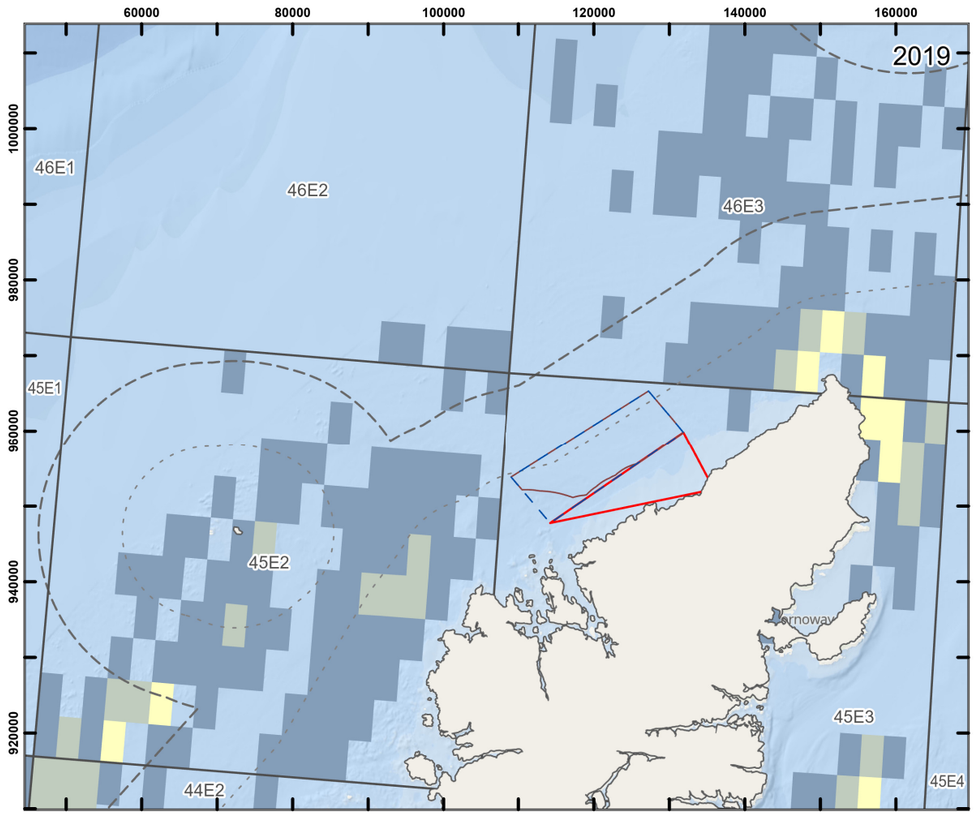
Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.2	

Plate 7-3: Potting Vessel Monitoring System Data for UK vessels ≥ 15 m, 2016 to 2019 (Source: MMO, 2023)









Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

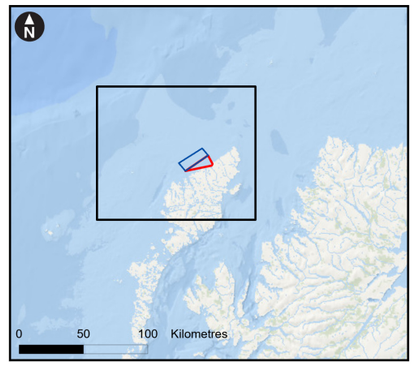
Potting (UK vessels ≥15m)

First Sales Value

Total value, £

- £0.01 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £101,000.00

Data source: MMO, 2023



0 9 18 27 36 Kilometres

Scale at A3: 1:800,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

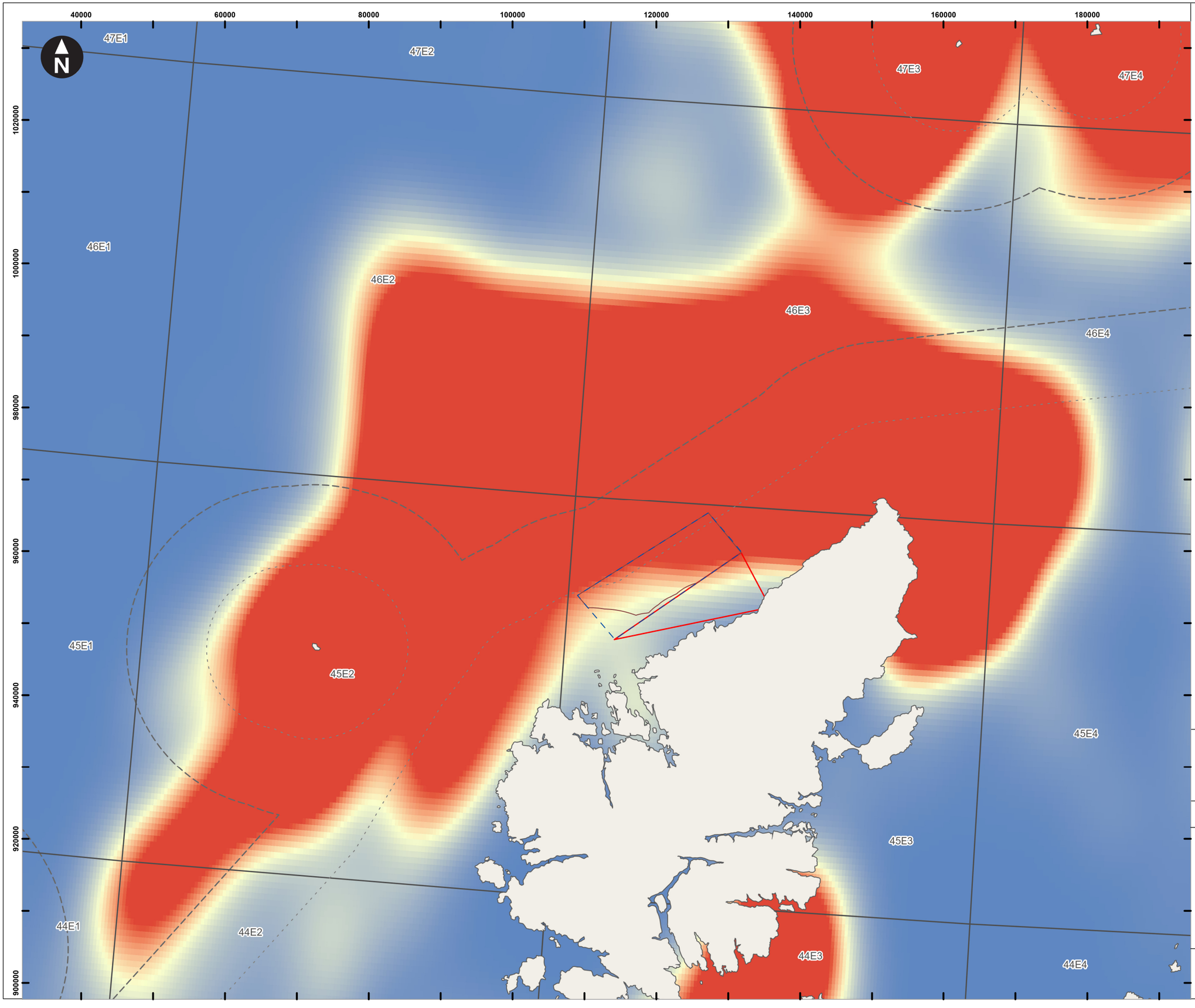
Figure 7.3
Potting Vessel Monitoring System Data for UK vessels ≥15m, 2016-2019

Document Number

70103316-WSPE-NIMA-CF-TR-7.3

13/03/2025

Plate 7-4: Crab Fishery Amalgamated VMS Intensity, 2009 to 2013 (Source: Kafas *et al.*, 2013)



Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

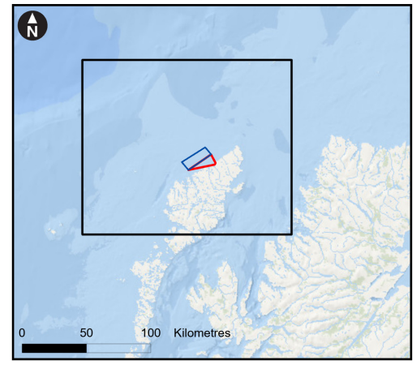
Crab 2009-2013 amalgamated VMS intensity

Value

0.958109

0

Data source: Marine Directorate, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

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Figure 7.4
Crab Fishery
Amalgamated VMS Intensity,
2009-2013

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.4	

Plate 7-5: Lobster Fishery Amalgamated VMS Intensity, 2009 to 2013 (Source: Kafas *et al*., 2013)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Lobster 2009-2013 VMS intensity layer.tif

Value

- 2.21873
- 0

Data source: Marine Directorate, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.4
Lobster Fishery
Amalgamated VMS Intensity,
2009-2013

Document Number

70103316-WSPE-NIMA-CF-TR-7.4

13/03/2025

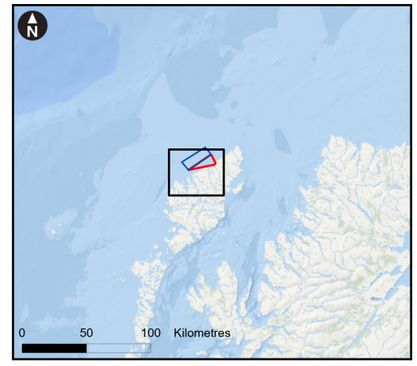
Plate 7-6: Inshore Fishing Grounds Targeted by Potting Gear (Source: FLO, 2025)

100000
120000
140000
960000
940000
45E2
45E3

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit
- Potting fishing grounds
- Areal extent of data

Data source: MMO, 2023



0 1.5 3 4.5 6 Kilometres

Scale at A3: 1:131,072

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.6
Inshore Fishing Grounds Targeted by Potting Gear

Document Number	16/03/2025
70103316-WSPE-NIMA-CF-TR-7.6	

Plate 7-7: Demersal Otter Trawl Average Annual Value, Scottish Under 12 m Vessels (Data from 2017-2021) (Source: Marine Directorate, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Demersal otter trawl under 12m, 2017-2021

Annual average value

- Under 5 vessels
- £0.01 - £2,000.00
- £2,000.01 - £5,000.00
- £5,000.01 - £20,000.00
- £20,000.01 - £50,000.00
- Greater than £50,000

Data source: Marine Directorate, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.7
Demersal Otter Trawl Average Annual Value, Scottish Under 12m Vessels (Data from 2017-2021)

Document Number
70103316-WSPE-NIMA-CF-TR-7.7

13/03/2025

Plate 7-8: Demersal Otter Trawl Vessel Monitoring System Data for UK vessels ≥ 15 m, 2020 (Source: MMO, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

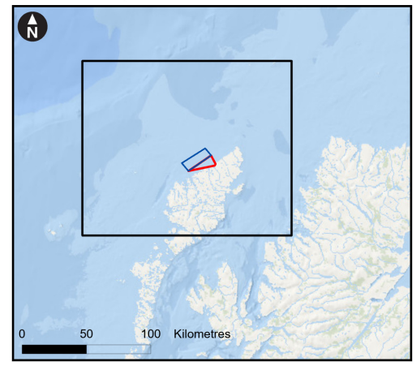
Demersal Otter Trawl 2020 (UK vessels ≥15m)

First Sales Value

Total value, £

- £0.02 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £595,000.00

Data source: MMO, 2023



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

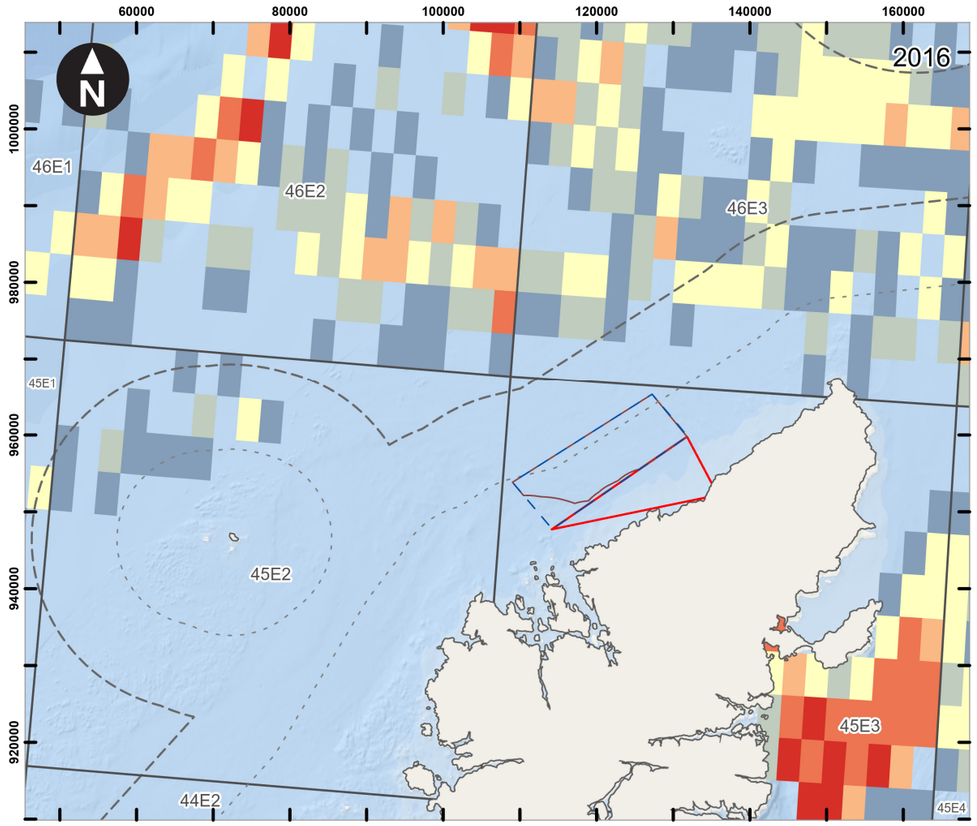
Figure 7.8
Demersal Otter Trawl Vessel Monitoring System Data for UK vessels ≥15m, 2020

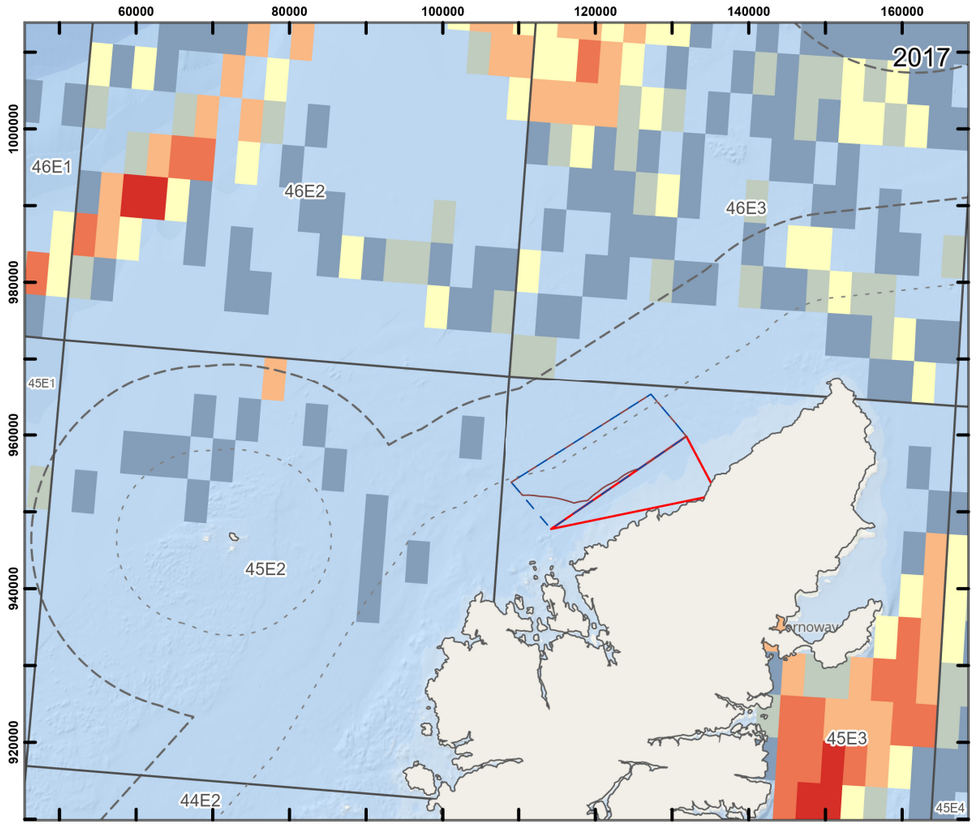
Document Number

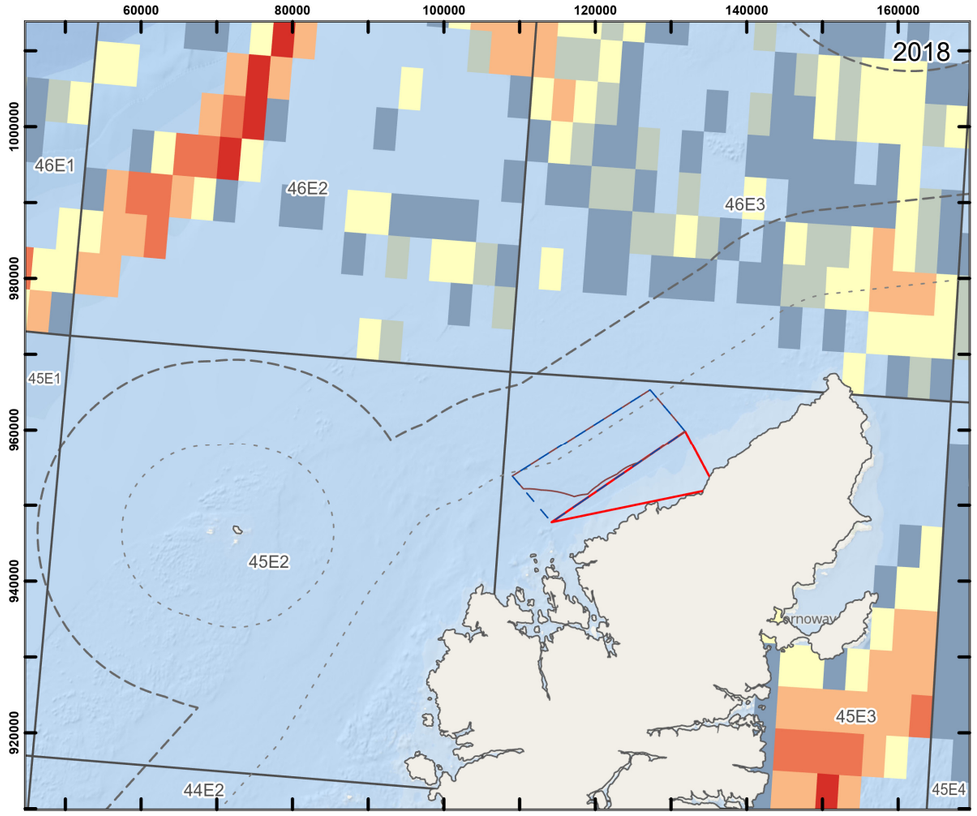
70103316-WSPE-NIMA-CF-TR-7.8

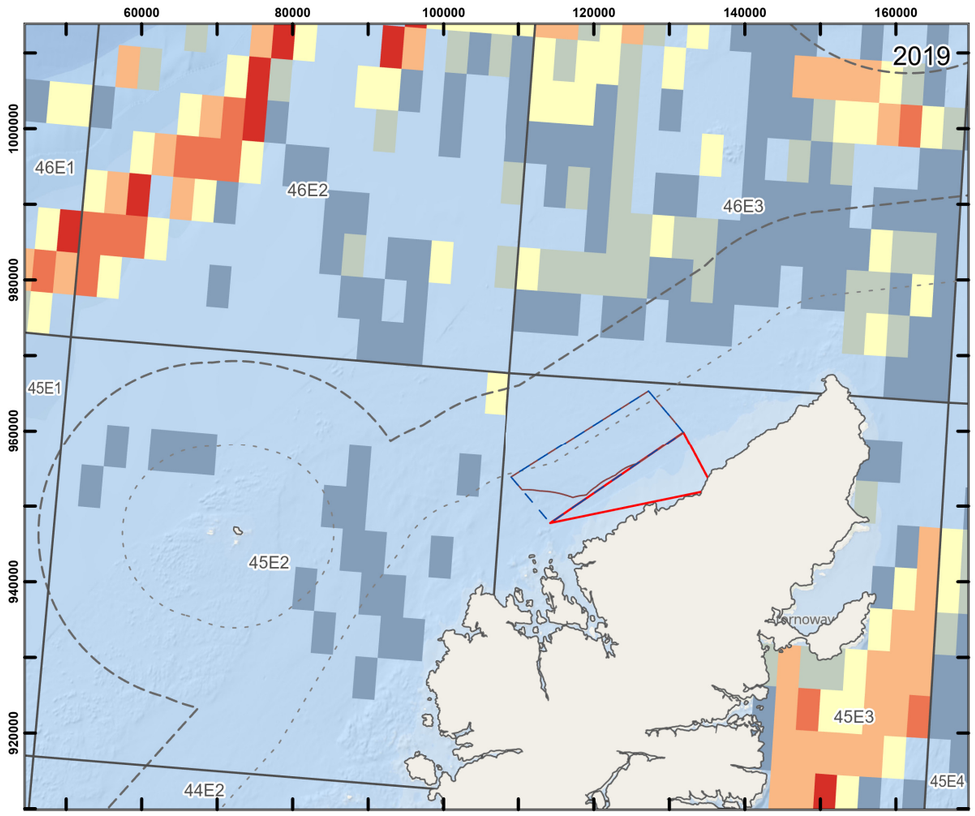
13/03/2025

Plate 7-9: Demersal Otter Trawl Vessel Monitoring System Data for UK vessels ≥ 15 m, 2016-2019 (Source: MMO, 2023)









Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

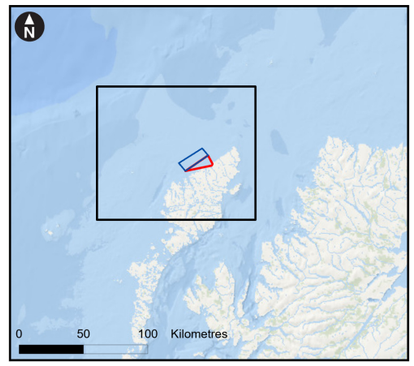
Demersal Otter Trawl (UK vessels ≥15m)

otbval

Total value, £

- £0.02 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £100,000.00

Data source: MMO, 2023



0 9 18 27 36 Kilometres

Scale at A3: 1:800,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

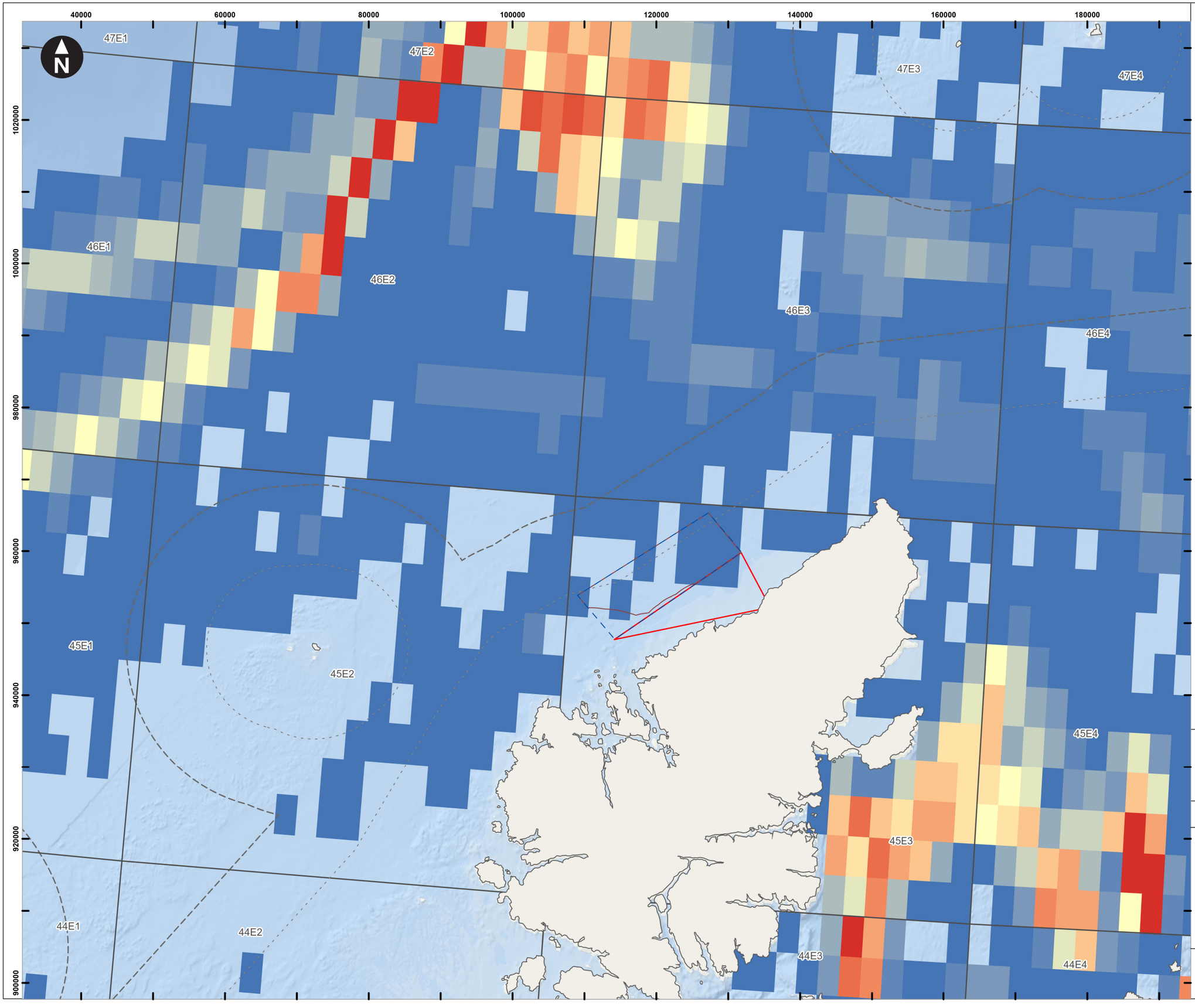
Figure 7.9
Demersal Otter Trawl Vessel Monitoring System Data for UK vessels ≥15m, 2016-2019

Document Number

70103316-WSPE-NIMA-CF-TR-7.9

13/03/2025

Plate 7-10: Demersal Otter Trawl Average Annual Surface Swept Area Ratio for EU and UK vessels ≥ 12 m, 2016-2020 (Source: ICES, 2022)



Key

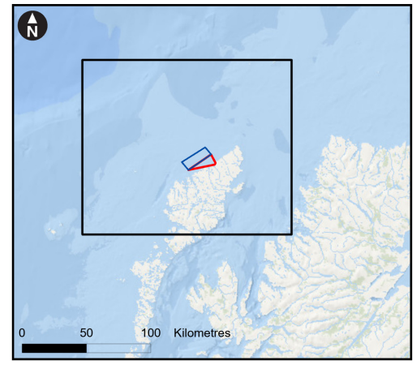
- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Demersal Otter Trawl (EU and UK vessels ≥12m)

Average Annual Surface Swept Area Ratio (2016-2020)

- 0.0 - 0.6
- 0.7 - 1.3
- 1.4 - 1.9
- 2.0 - 2.6
- 2.7 - 3.2
- 3.3 - 3.9
- 4.0 - 4.5
- 4.6 - 5.1
- 5.2 - 5.8
- 5.9 - 6.4
- 6.5 - 7.1
- 7.2 - 7.7
- 7.8 - 8.4
- 8.5 - 9.0
- 9.1 - 23.2

Data source: ICES, 2024



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.10
Demersal Otter Trawl Average Annual Surface Swept Area Ratio For EU and UK vessels ≥12m, 2016-2020

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.10	

Plate 7-11: Nephrops Fishery Amalgamated VMS Intensity, 2009 to 2013 (Source: Kafas *et al.*, 2013)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

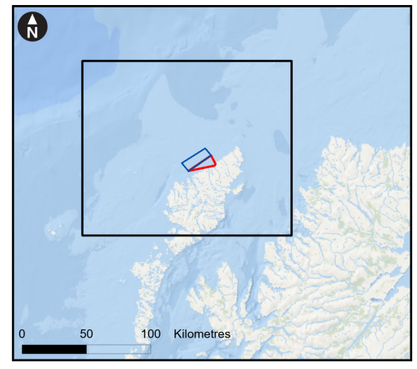
Nephrops mobile 2009-2013 amalgamated VMS intensity

Value

High : 0.617172

Low : 0

Data source: Marine Directorate, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.11
Nephrops Fishery
Amalgamated VMS Intensity,
2009-2013

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.11	

Plate 7-12: Squid Fishery Amalgamated VMS Intensity, 2009 to 2013 (Source: Kafas *et al.*, 2013)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

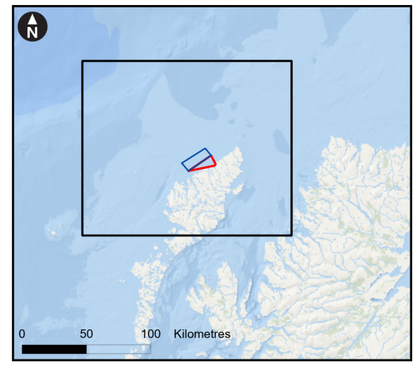
Squid 2009-2013 amalgamated VMS intensity layer

Value

High : 5.328

Low : 0

Data source: Marine Directorate, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

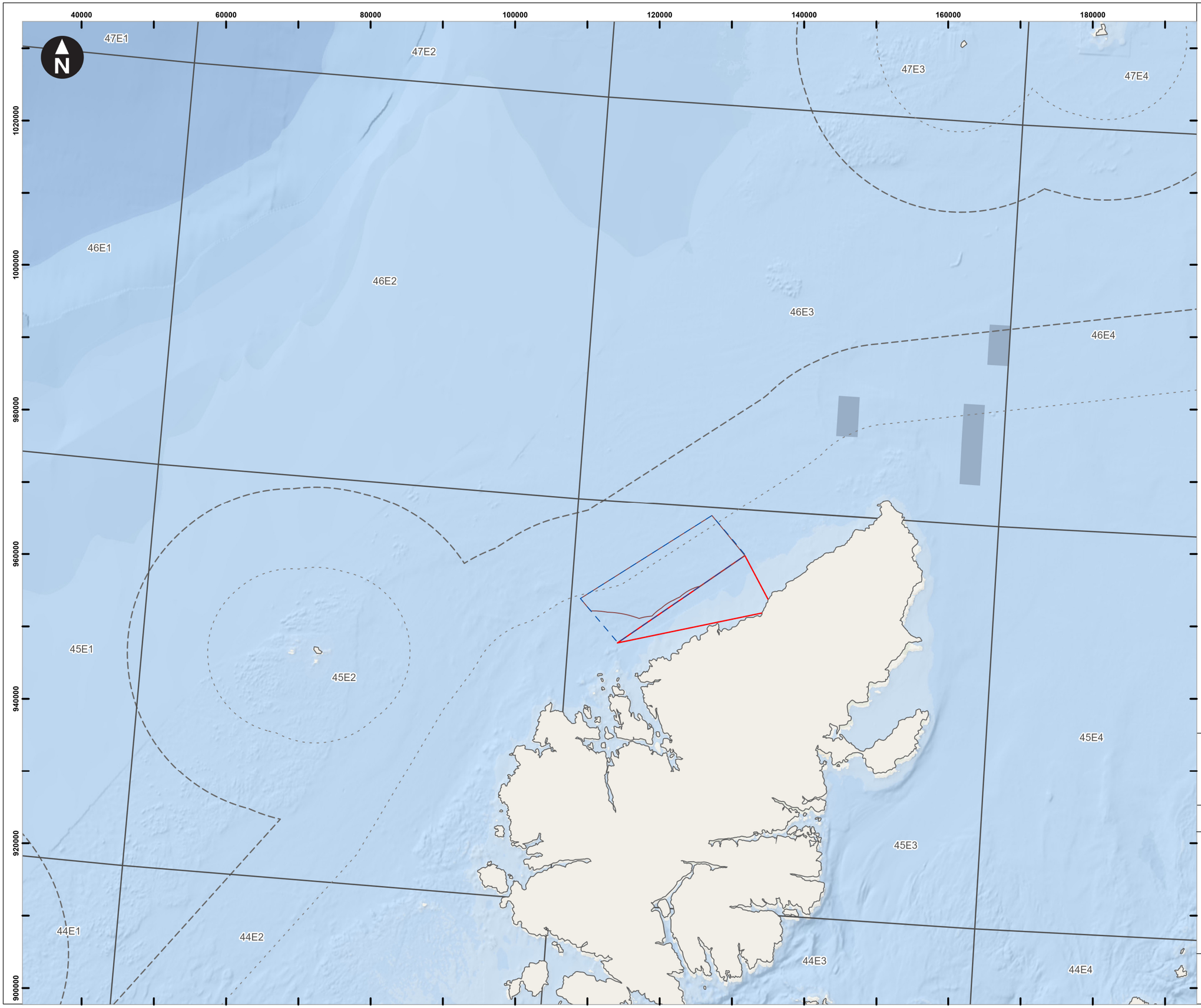
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.12
Squid Fishery
Amalgamated VMS Intensity,
2009-2013

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.12	

Plate 7-13: Demersal Seine Vessel Monitoring System Data for UK vessels ≥ 15 m, 2020 (Source: MMO, 2023)



Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

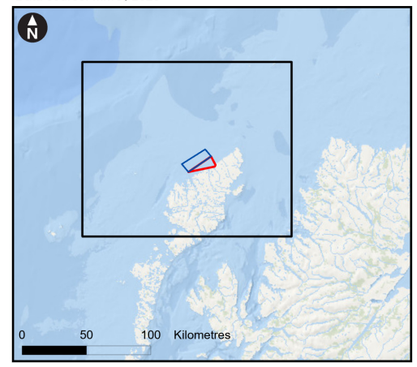
Demersal Seine 2020 (UK vessels ≥15m)

First sales value

Total value, £

- £0.02 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £132,154.33

Data source: MMO, 2023



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

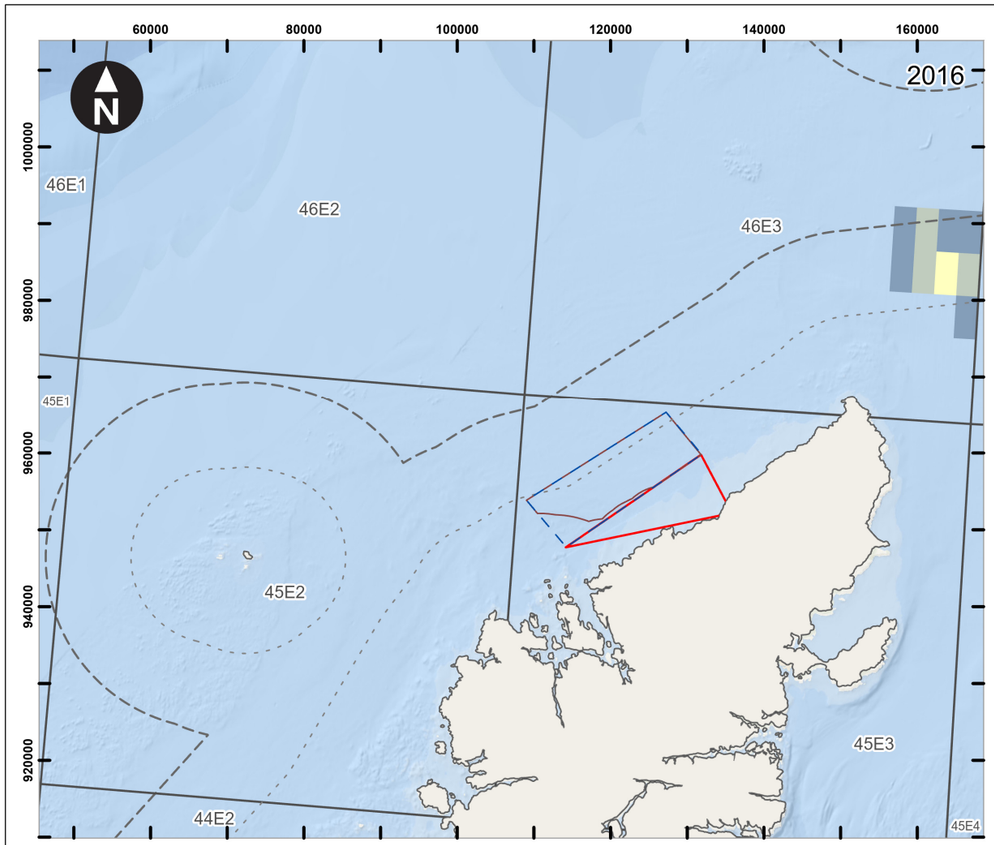
Drawn: FN Checked: SM Approved: LB

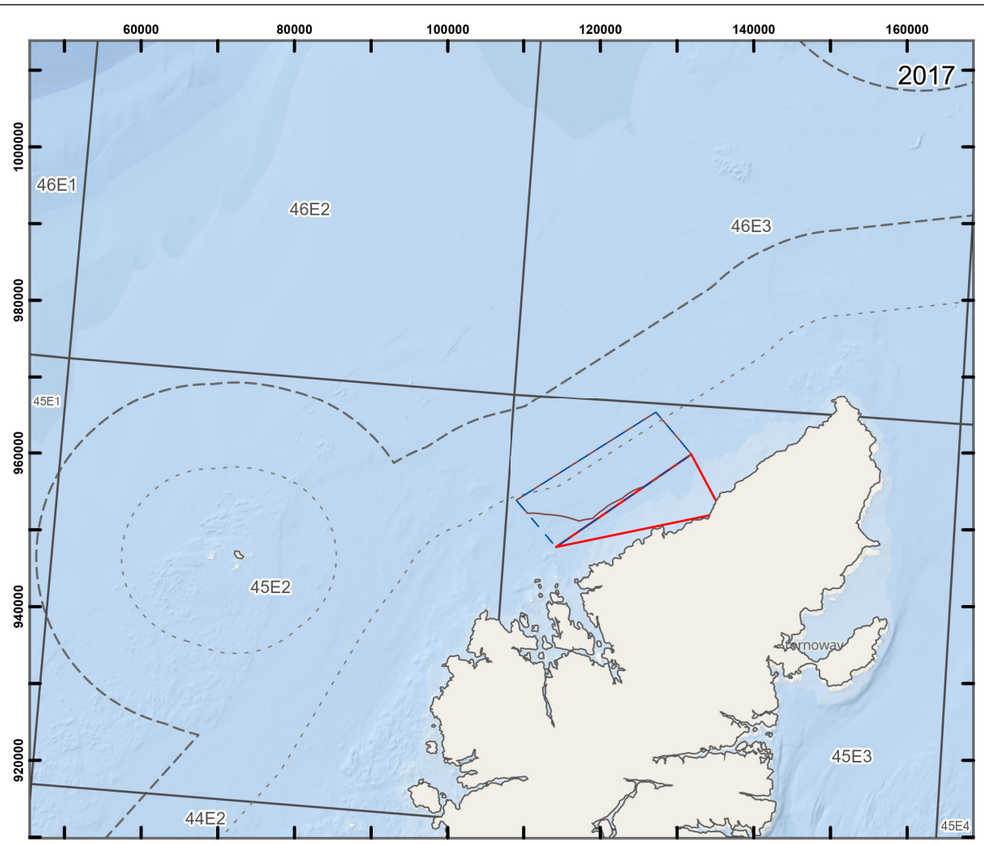
Spiorad na Mara Offshore Wind farm

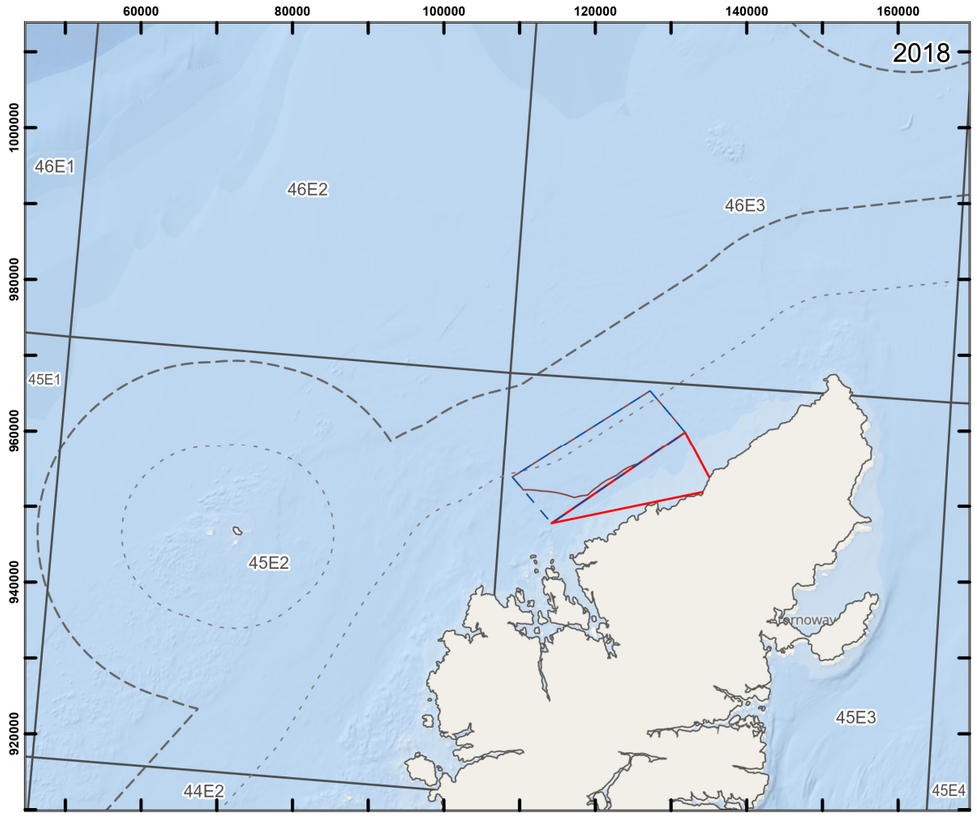
Figure 7.13
Demersal Seine Vessel Monitoring System Data for UK vessels ≥15m, 2020

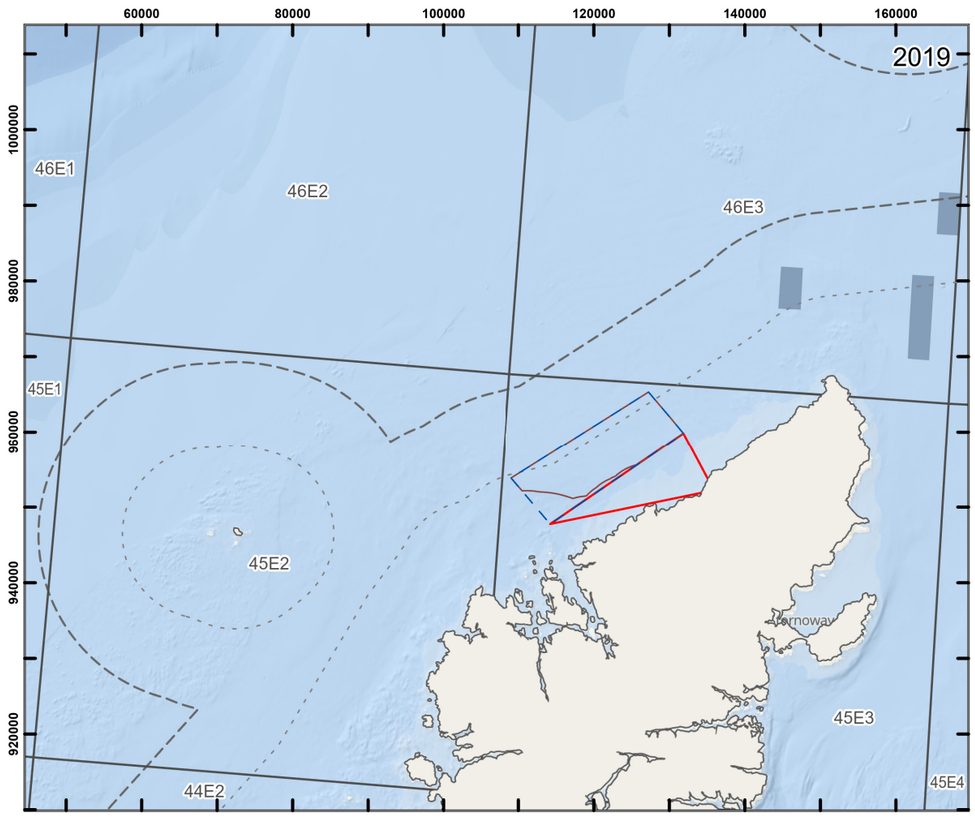
Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.13	

Plate 7-14: Demersal Seine Vessel Monitoring System Data for UK vessels ≥ 15 m, 2016-2019 (Source: MMO, 2023)









Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

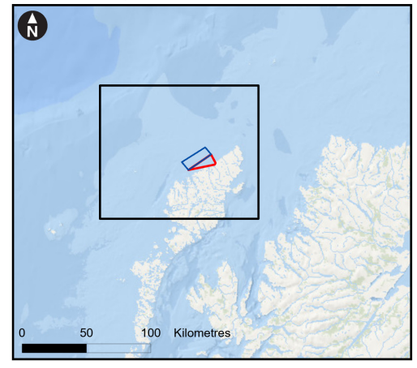
Demersal Seine (UK vessels ≥15m)

sscval

Total Value, £

- £0.02 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £80,001.43

Data source: MMO, 2023



0 9 18 27 36 Kilometres

Scale at A3: 1:800,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.14
Demersal Seine Vessel Monitoring System Data for UK vessels ≥15m, 2016-2019

Document Number

70103316-WSPE-NIMA-CF-TR-7.14

13/03/2025

Plate 7-15: Demersal Seine Average Annual Surface Swept Area Ratio for EU and UK vessels ≥ 12 m, 2016-2020 (Source: ICES, 2022)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

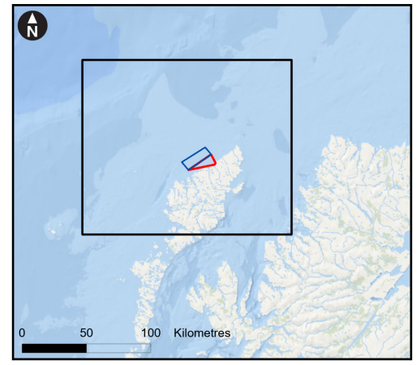
- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Demersal Seine (EU and UK vessels ≥12m)

Average Annual Surface Swept Area Ratio (2016-2020)

- 0.0 - 0.6
- 0.7 - 1.3
- 1.4 - 1.9
- 2.0 - 2.6
- 2.7 - 3.2
- 3.3 - 3.9
- 4.0 - 4.5
- 4.6 - 5.1
- 5.2 - 5.8
- 5.9 - 6.4
- 6.5 - 7.1
- 7.2 - 7.7
- 7.8 - 8.4
- 8.5 - 9.0
- 9.1 - 46.8

Data source: ICES, 2024



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.15
Demersal Otter Trawl Average Annual Surface Swept Area Ratio For EU and UK vessels ≥12m, 2016-2020

Document Number
70103316-WSPE-NIMA-CF-TR-7.15

13/03/2025

Plate 7-16: Dredge Average Annual Value, Scottish Under 12 m Vessels (Data from 2017-2021) (Source: Marine Directorate, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Dredge Under12m 2017-2021

Annual average value

- Under 5 vessels
- £0.01 - £2,000.00
- £2,000.01 - £5,000.00
- £5,000.01 - £20,000.00
- £20,000.01 - £50,000.00
- Greater than £50,000

Data source: Marine Directorate, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.16
Dredge Average Annual Value, Scottish Under 12m Vessels (Data from 2017-2021)

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.16	

Plate 7-17: Dredge Vessel Monitoring System Data for UK vessels ≥ 15 m, 2020 (Source: MMO, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Dredge 2020 (UK vessels ≥15m)

First Sales Value

Total value, £

- £0.02 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £232,000.00

Data source: MMO, 2023

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

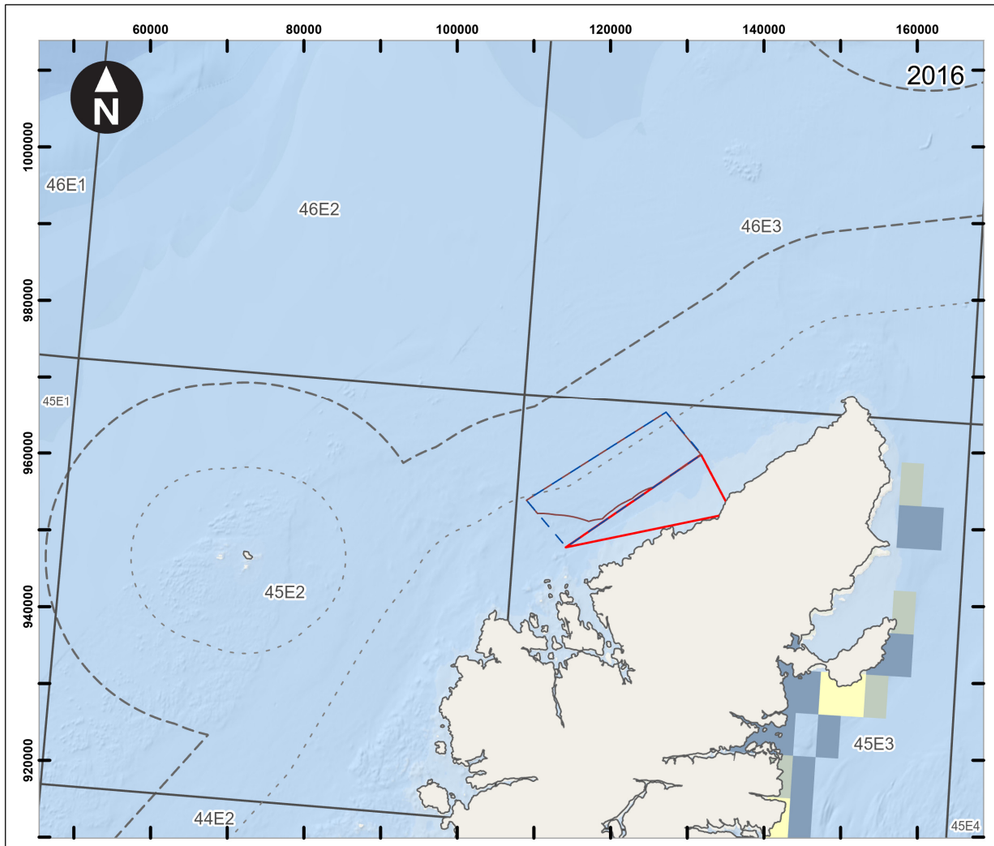
Drawn: FN Checked: SM Approved: LB

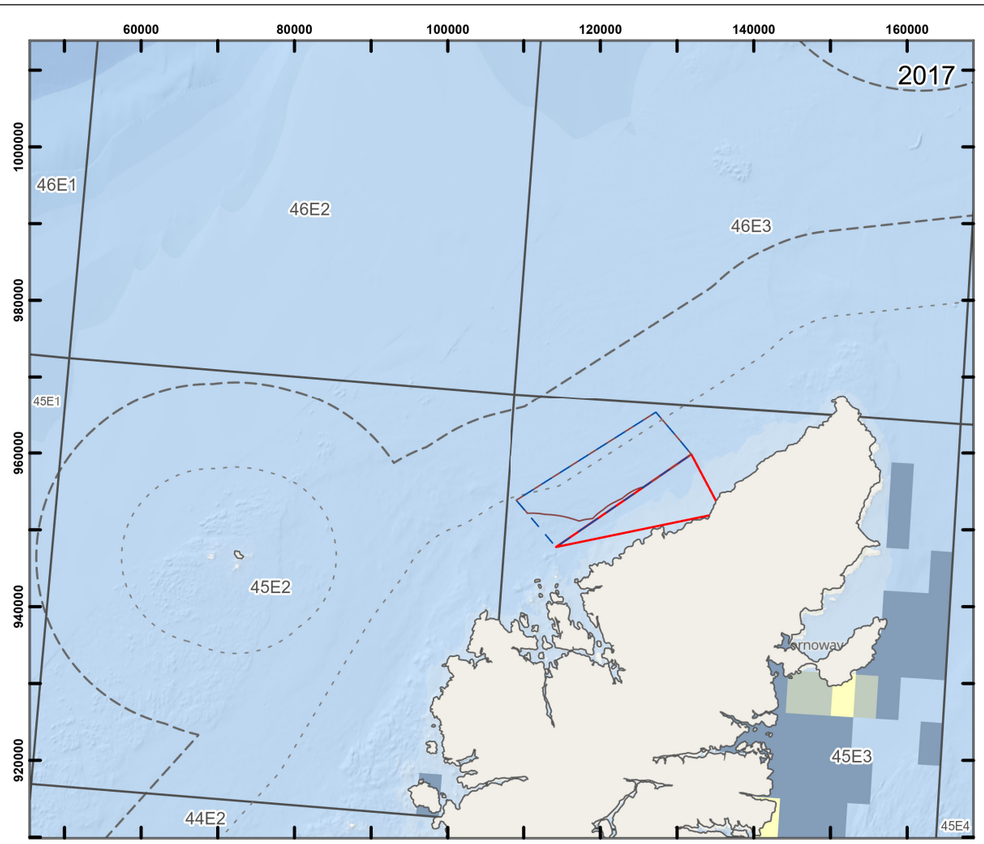
Spiorad na Mara Offshore Wind farm

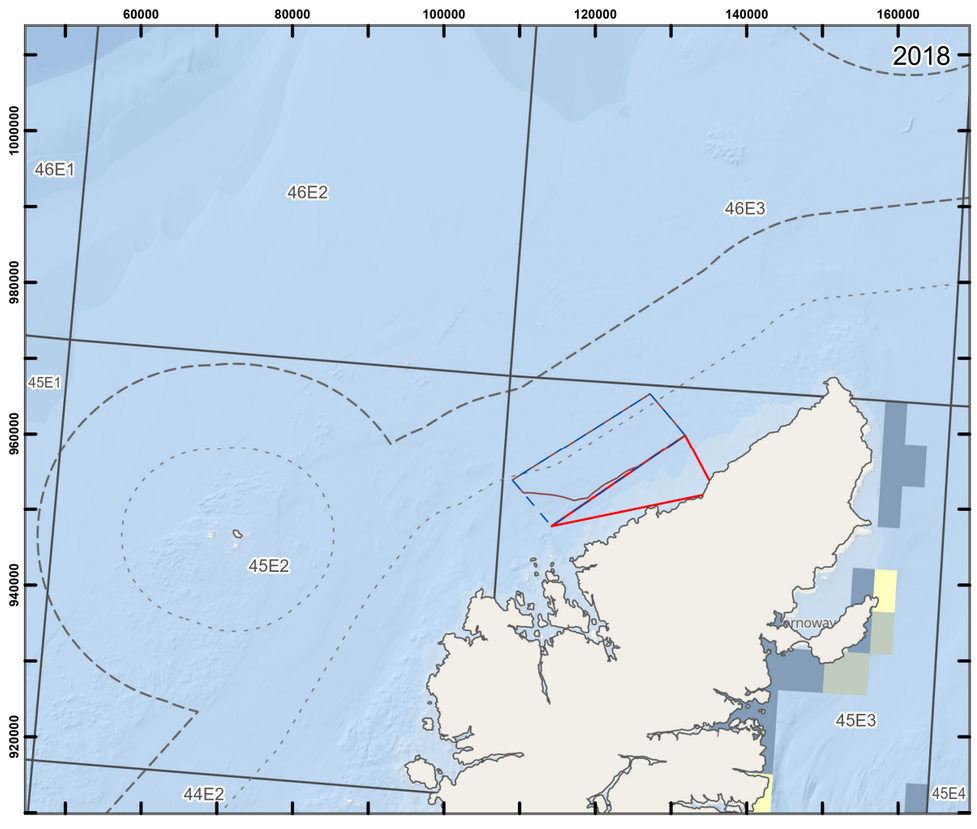
Figure 7.17
Dredge Vessel Monitoring System
Data for UK vessels ≥15m, 2020

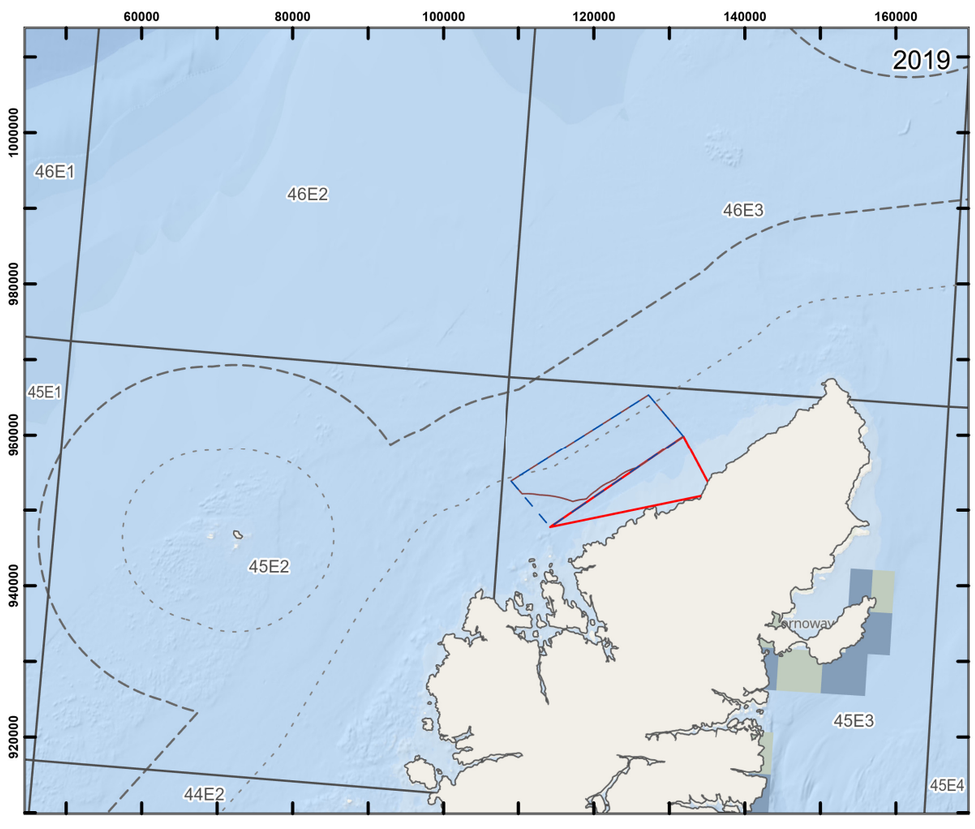
Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.17	

Plate 7-18: Dredge Vessel Monitoring System Data for UK vessels ≥ 15 m, 2016-2019 (Source: MMO, 2023)









Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

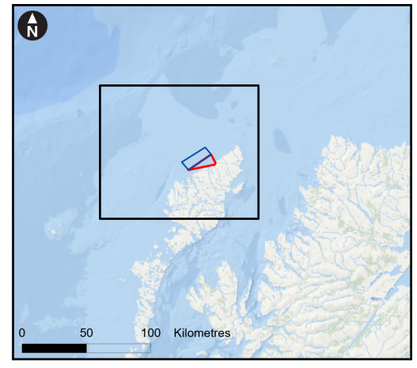
Dredge (UK vessels ≥15m)

First Sales Value

Total value, £

- £0.91 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £280,000.00

Data source: MMO, 2023



0 9 18 27 36 Kilometres

Scale at A3: 1:800,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

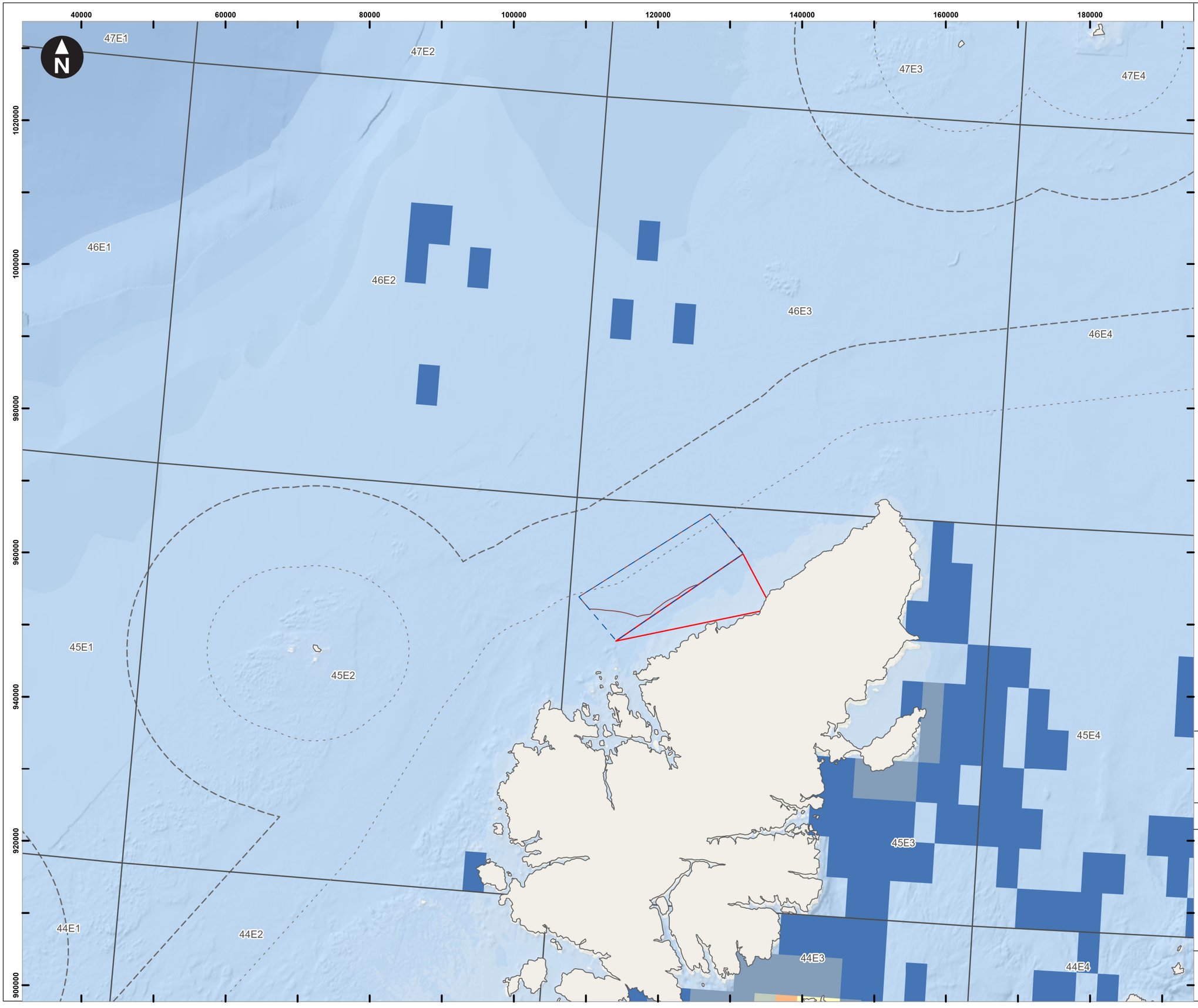
Figure 7.18
Dredge Vessel Monitoring System Data for UK vessels ≥15m, 2016-2019

Document Number

70103316-WSPE-NIMA-CF-TR-7.18

13/03/2025

Plate 7-19: Dredge Average Annual Surface Swept Area Ratio for EU and UK vessels ≥ 12 m, 2016-2020 (Source: ICES, 2022)



Key

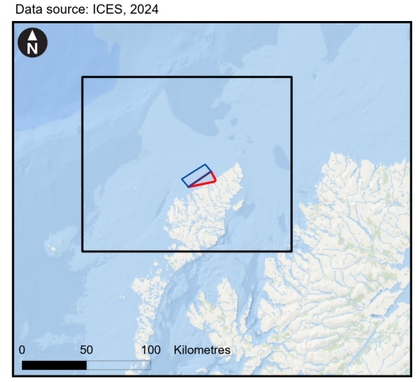
- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Dredge (EU and UK vessels ≥12m)

Average Annual Surface Swept Area Ratio (2016-2020)

- 0.0 - 0.1
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.75
- 0.75 - 1.0
- 1.1 - 3.8

Data source: ICES, 2024



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.19
Dredge Average Annual Surface Swept Area Ratio For EU and UK vessels ≥12m, 2016-2020

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.19	

Plate 7-20: Scallop Fishery Amalgamated VMS Intensity, 2009-2013 (Source: Kafas *et al.*, 2013)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

N

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

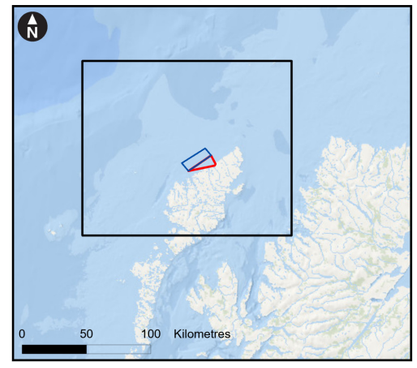
Scallop 2009-2013 amalgamated VMS intensity

Value

High : 0.805605

Low : 0

Data source: Marine Directorate, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

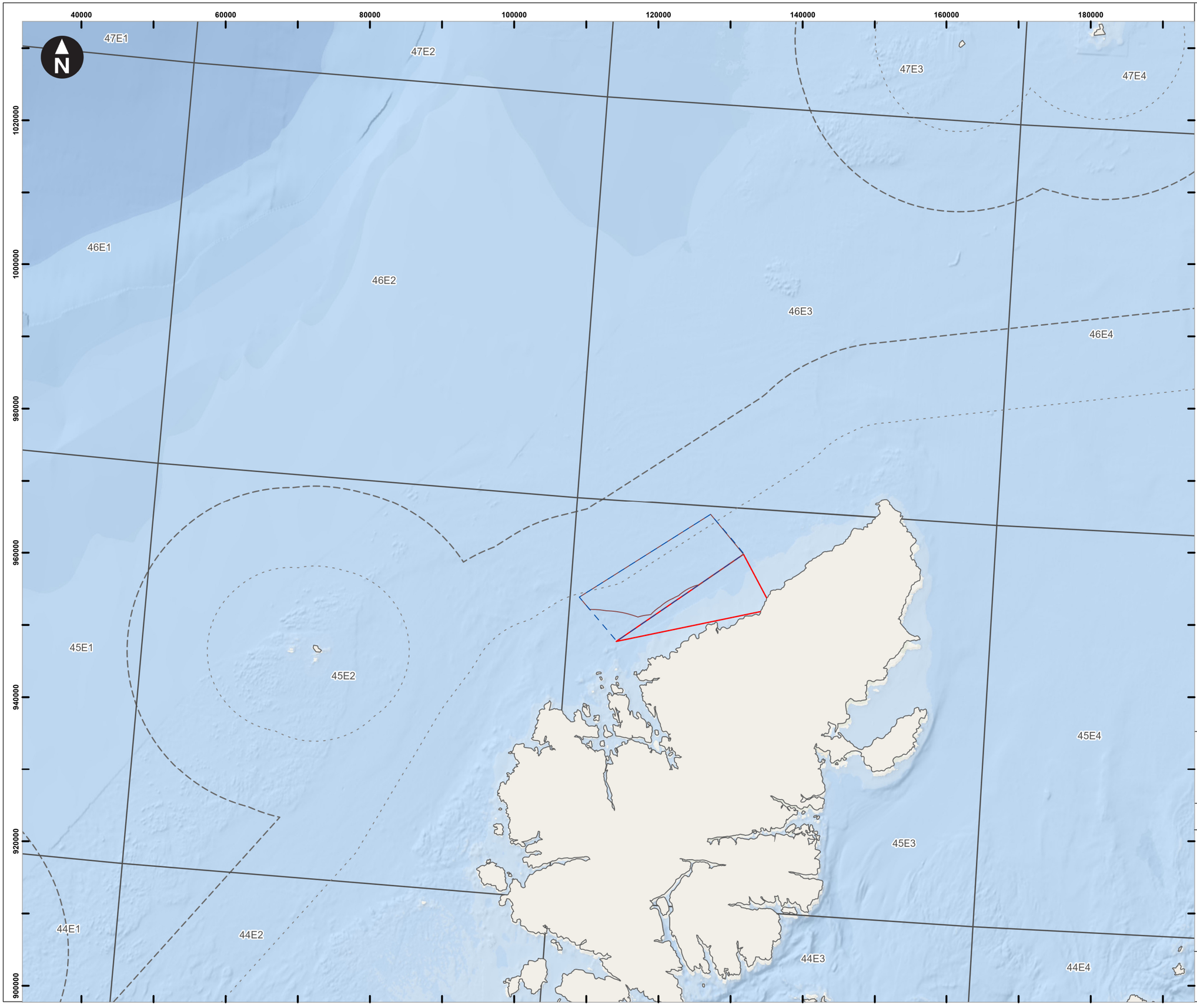
Figure 7.20
Scallop Fishery
Amalgamated VMS Intensity,
2009-2013

Document Number

70103316-WSPE-NIMA-CF-TR-7.20

13/03/2025

Plate 7-21: Beam Trawl Vessel Monitoring System Data for UK vessels ≥ 15 m, Cumulative 2016-2020 (Source: MMO, 2023)



Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

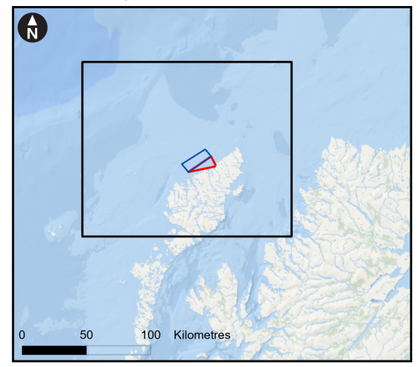
Beam Trawl 2016-2020 (UK vessels ≥15m)

First Sales Value

Total value, £

- £0.02 - £1,000.00
- £1,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £45,987.96

Data source: MMO, 2023



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.21
Beam Trawl Vessel Monitoring System Data for UK vessels ≥15m, Cumulative 2016-2020

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.21	

Plate 7-22: Pelagic Trawl Vessel Monitoring System Data for UK vessels ≥ 15 m, 2020 (Source: MMO, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Pelagic Trawl 2020 (UK vessels ≥15m)

First Sales Value

Total value, £

- £0.02 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £267,000.00

Data source: MMO, 2023

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

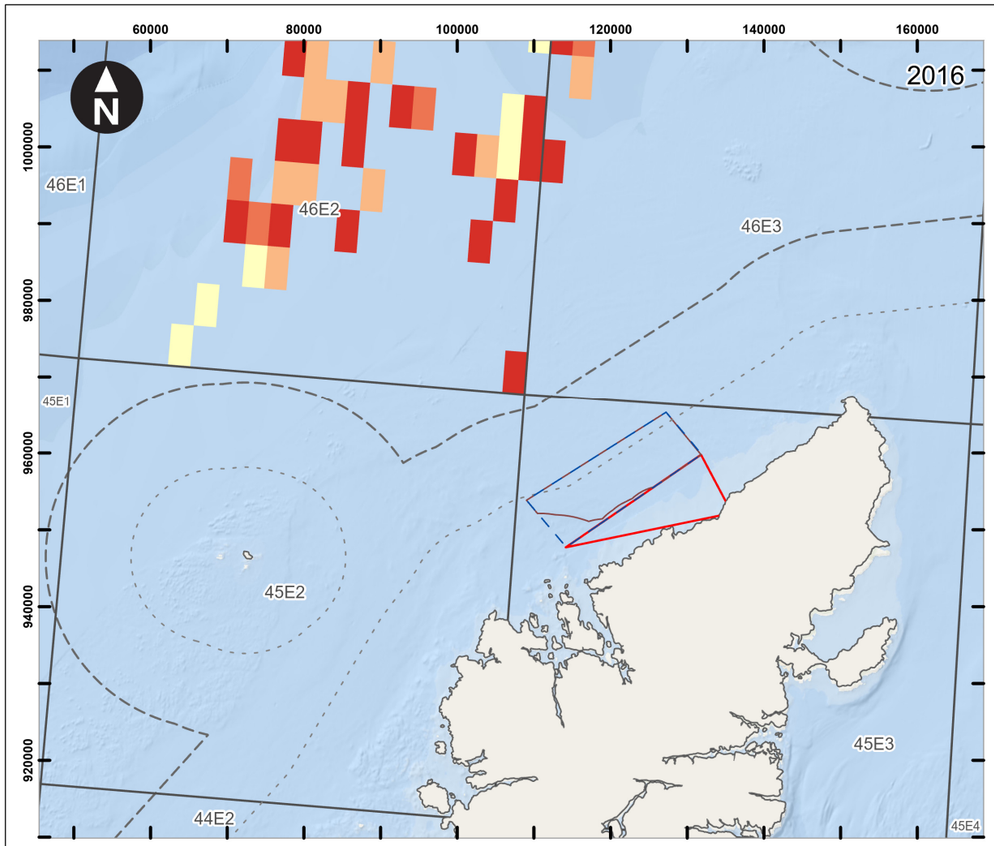
Drawn: FN Checked: SM Approved: LB

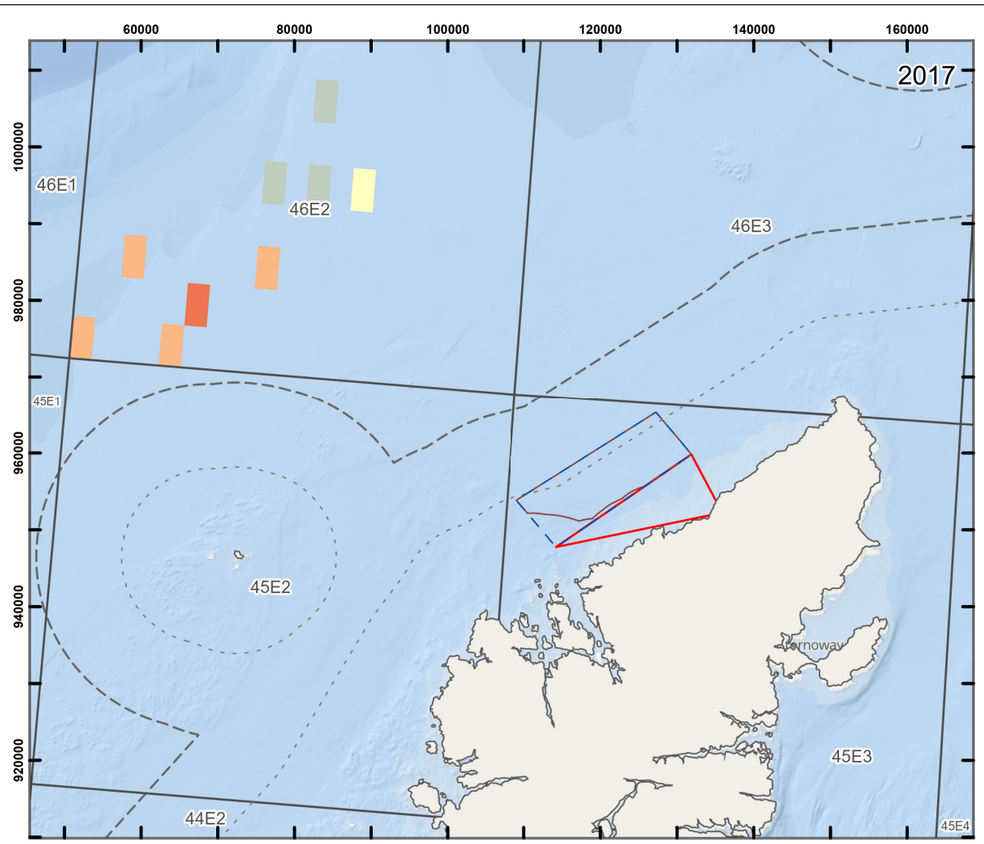
Spiorad na Mara Offshore Wind farm

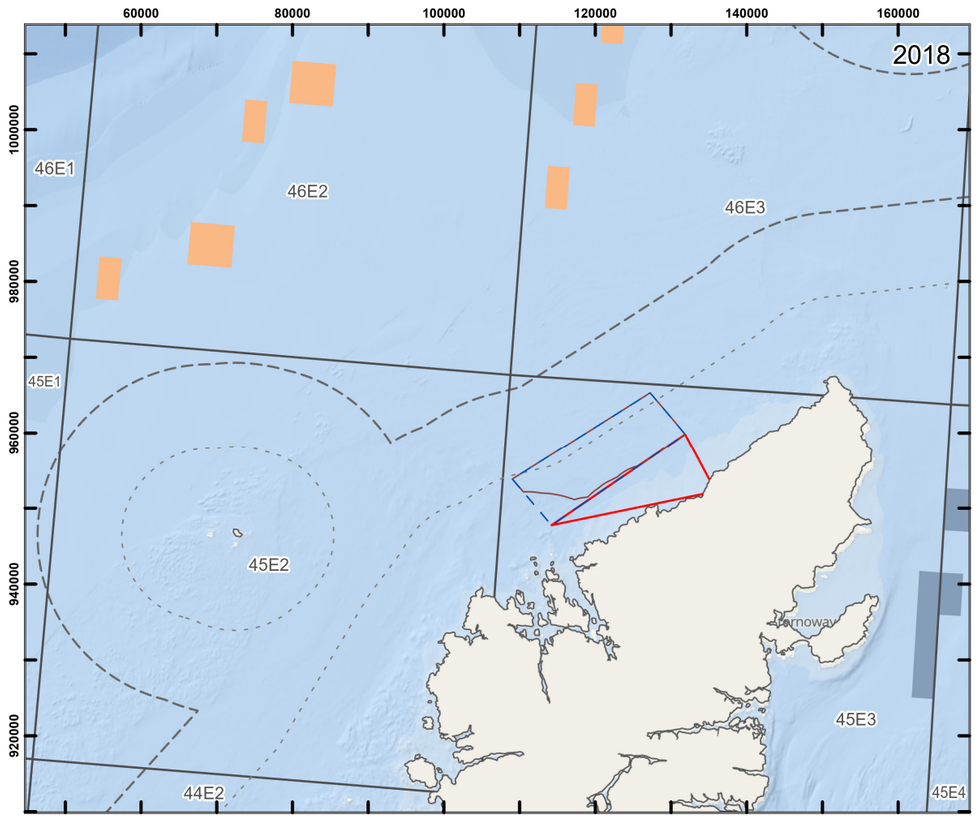
Figure 7.22
Pelagic Trawl Vessel Monitoring System Data for UK vessels ≥15m, 2020

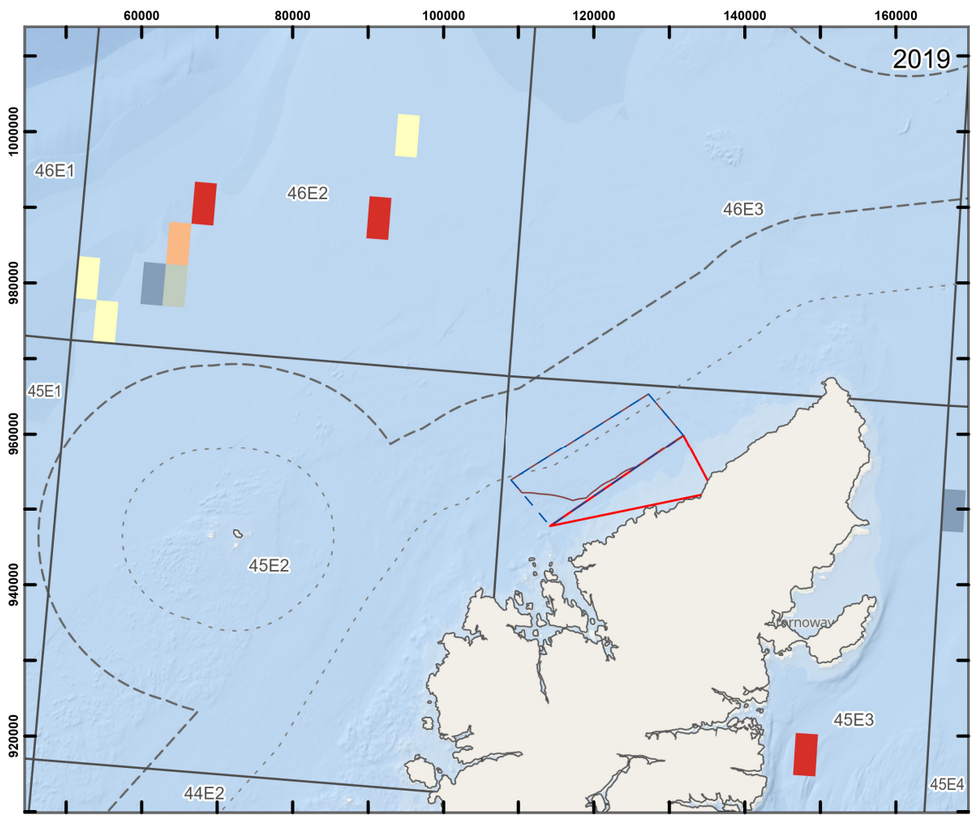
Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.22	

Plate 7-23: Pelagic Trawl Vessel Monitoring System Data for UK vessels ≥ 15 m, 2016-2019 (Source: MMO, 2023)









Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

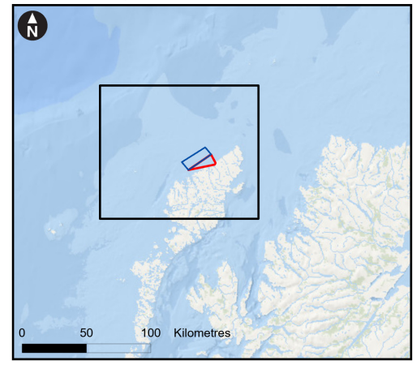
Pelagic Trawl (UK vessels ≥15m)

UK pelagic trawl first sales value

Total value, £

- £0.02 - £5,000.00
- £5,000.01 - £10,000.00
- £10,000.01 - £25,000.00
- £25,000.01 - £50,000.00
- £50,000.01 - £75,000.00
- £75,000.01 - £242,000.00

Data source: MMO, 2023



0 9 18 27 36 Kilometres

Scale at A3: 1:800,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.23
Pelagic Trawl Vessel Monitoring System Data for UK vessels ≥15m, 2016-2019

Document Number

70103316-WSPE-NIMA-CF-TR-7.23

13/03/2025

Plate 7-24: Pelagic Herring Fishery Amalgamated VMS Intensity, 2009-2013 (Source: Kafas *et al.*, 2013)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

N

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

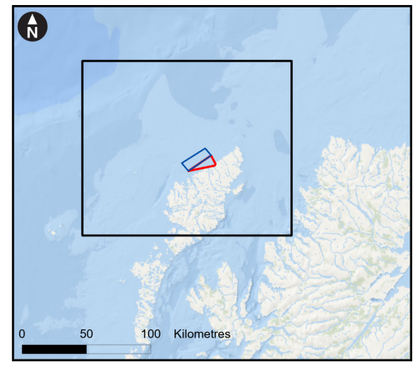
Pelagic - Herring 2009-2013 amalgamated VMS intensity

Value

0.730989

0

Data source: MMO, 2023



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.24
Pelagic Herring Fishery
Amalgamated VMS Intensity,
2009-2013

Document Number

70103316-WSPE-NIMA-CF-TR-7.24

13/03/2025

Plate 7-25: Pelagic Mackerel Fishery Amalgamated VMS Intensity, 2009-2013 (Source: Kafas *et al.*, 2013)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

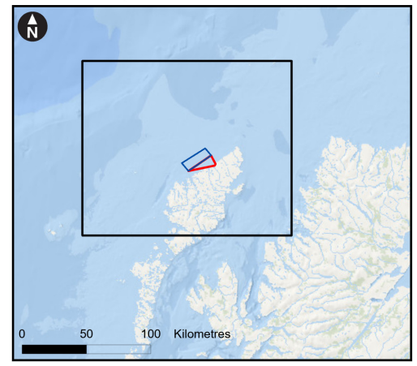
Pelagic - Mackerel 2009-2013 amalgamated VMS intensity

Value

1.68568

0

Data source: MMO, 2023



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

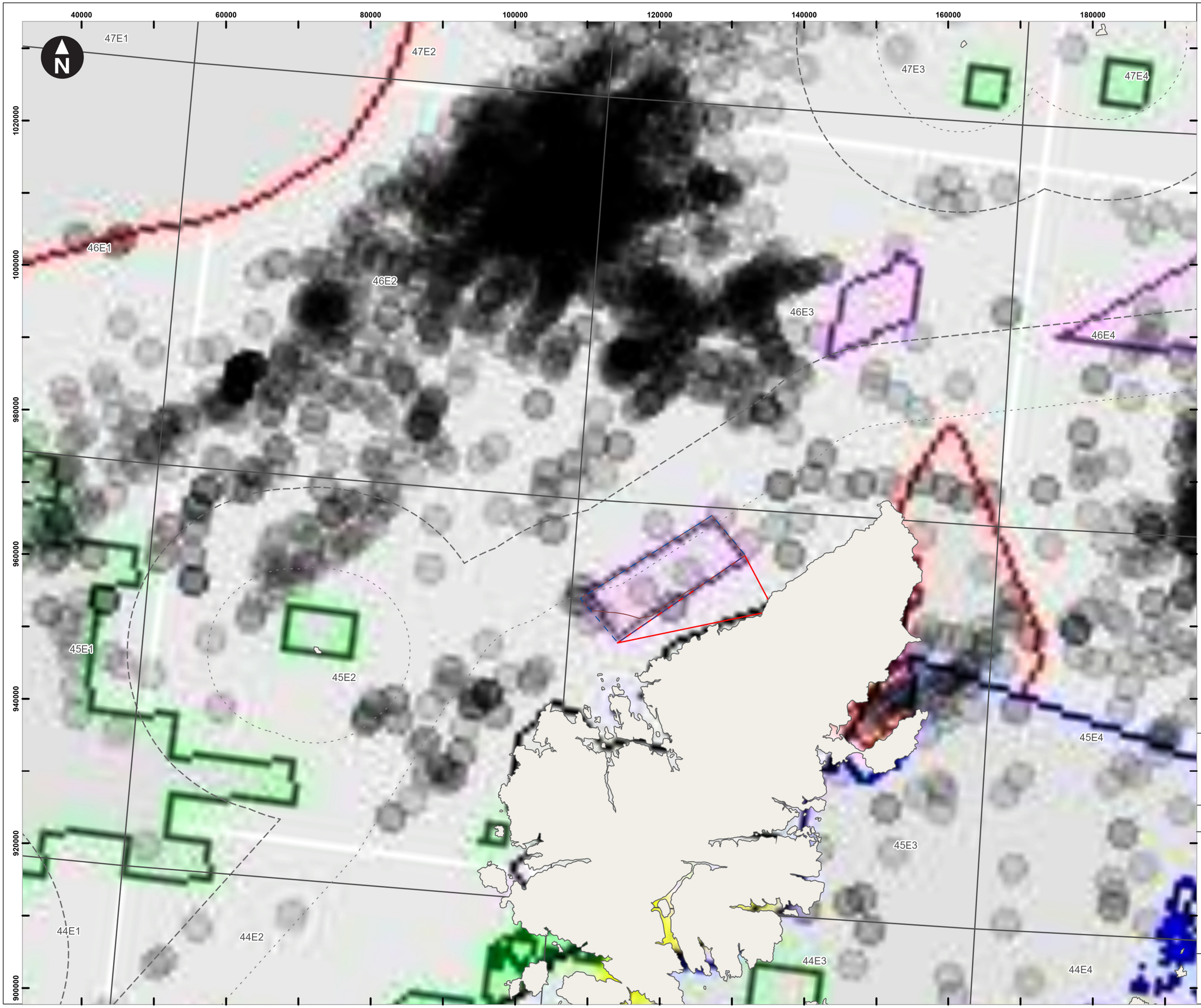
Figure 7.25
Pelagic Mackerel Fishery
Amalgamated VMS Intensity,
2009-2013

Document Number

70103316-WSPE-NIMA-CF-TR-7.25

13/03/2025

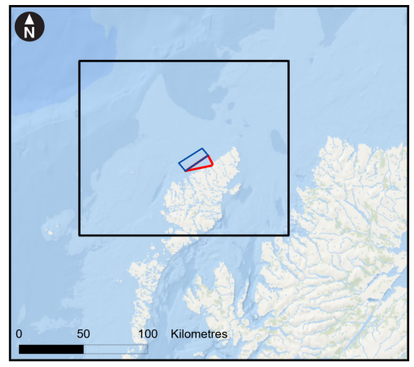
Plate 7-26: Scottish Pelagic Active Fishing VMS Data 2013-2021 (Source: SPFA, 2024)



Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit
- Scottish pelagic active fishing and transiting vessels 2013-2021
- Other Scotwind
- INTOG
- Marine Protected Area
- Special Protected Area

Data source: SPFA, 2024



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

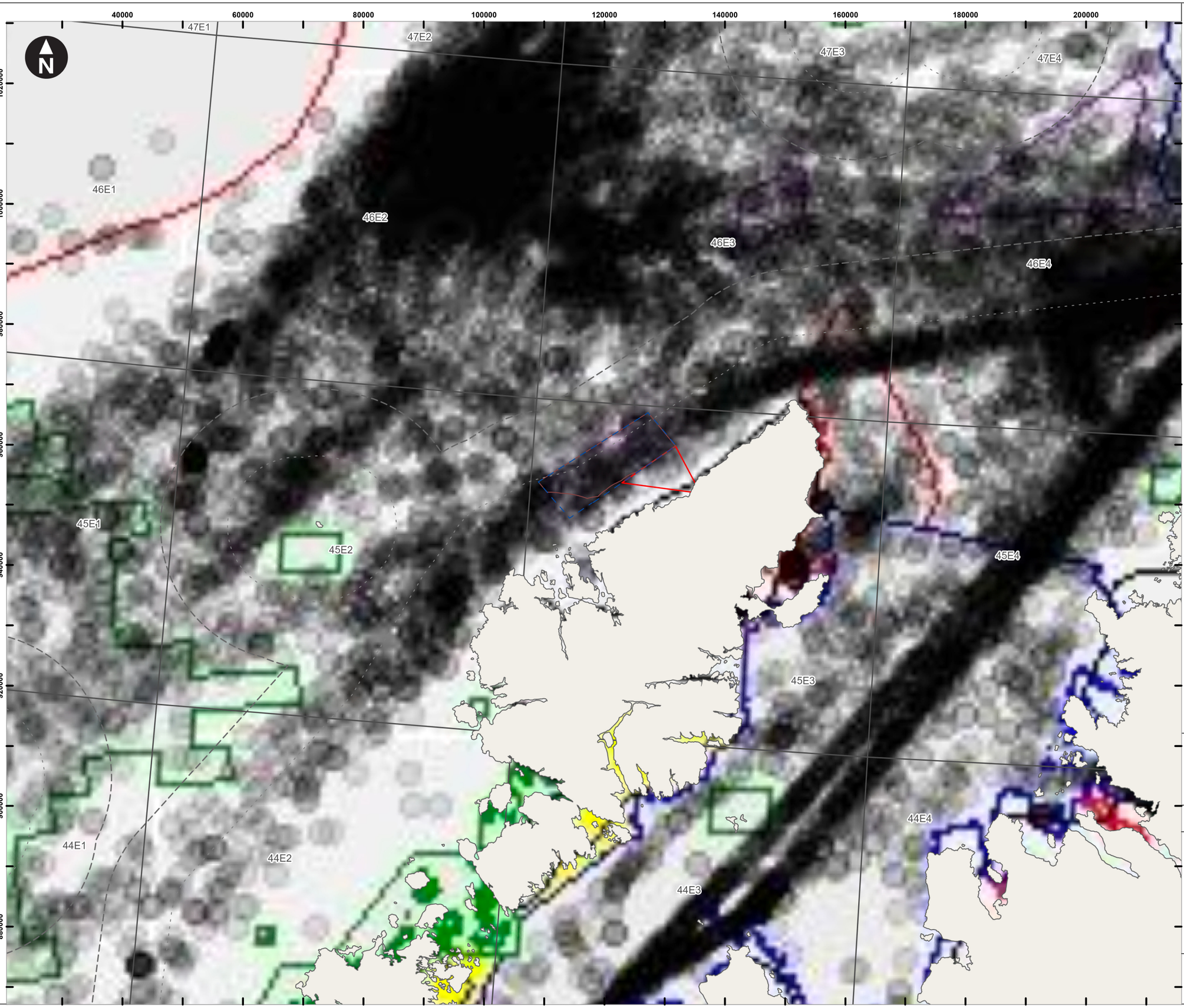
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.26
Scottish Pelagic Active Fishing VMS Data 2013-2021

Document Number	16/03/2025
70103316-WSPE-NIMA-CF-TR-7.26	

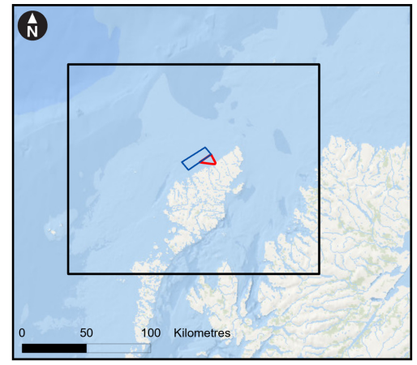
Plate 7-27: Scottish Pelagic Active Fishing and Transiting VMS Data 2013-2021 (Source: SPFA, 2024)



Key

- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit
- Scottish pelagic active fishing and transiting vessels 2013-2021
- Other Scotwind
- INTOG
- Marine Protected Area
- Special Protected Area

Data source: SPFA, 2024



0 6.5 13 19.5 26 Kilometres

Scale at A3: 1:600,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.27
Scottish Pelagic Active Fishing and Transiting VMS Data 2013-2021

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.27	

Plate 7-28: Diving Average Annual Value, Scottish Under 12 m Vessels (Data from 2017-2021) (Source: Marine Directorate, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Diving Under12m 2017-2021

Diving (under 12m vessels)

- Under 5 vessels
- £0.01 - £2,000.00
- £2,000.01 - £5,000.00
- £5,000.01 - £20,000.00
- £20,000.01 - £50,000.00
- Greater than £50,000

Data source: Marine Directorate, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.28
Diving Average Annual Value, Scottish Under 12m Vessels (Data from 2017-2021)

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.28	

Plate 7-29: Rod and Line Average Annual Value, Scottish Under 12 m Vessels (Data from 2017-2021) (Source: Marine Directorate, 2023)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Rods and lines under 12m, 2017-2021

Annual average value

- Under 5 vessels
- £0.01 - £2,000.00
- £2,000.01 - £5,000.00
- £5,000.01 - £20,000.00
- £20,000.01 - £50,000.00
- Greater than £50,000

Data source: Marine Directorate, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

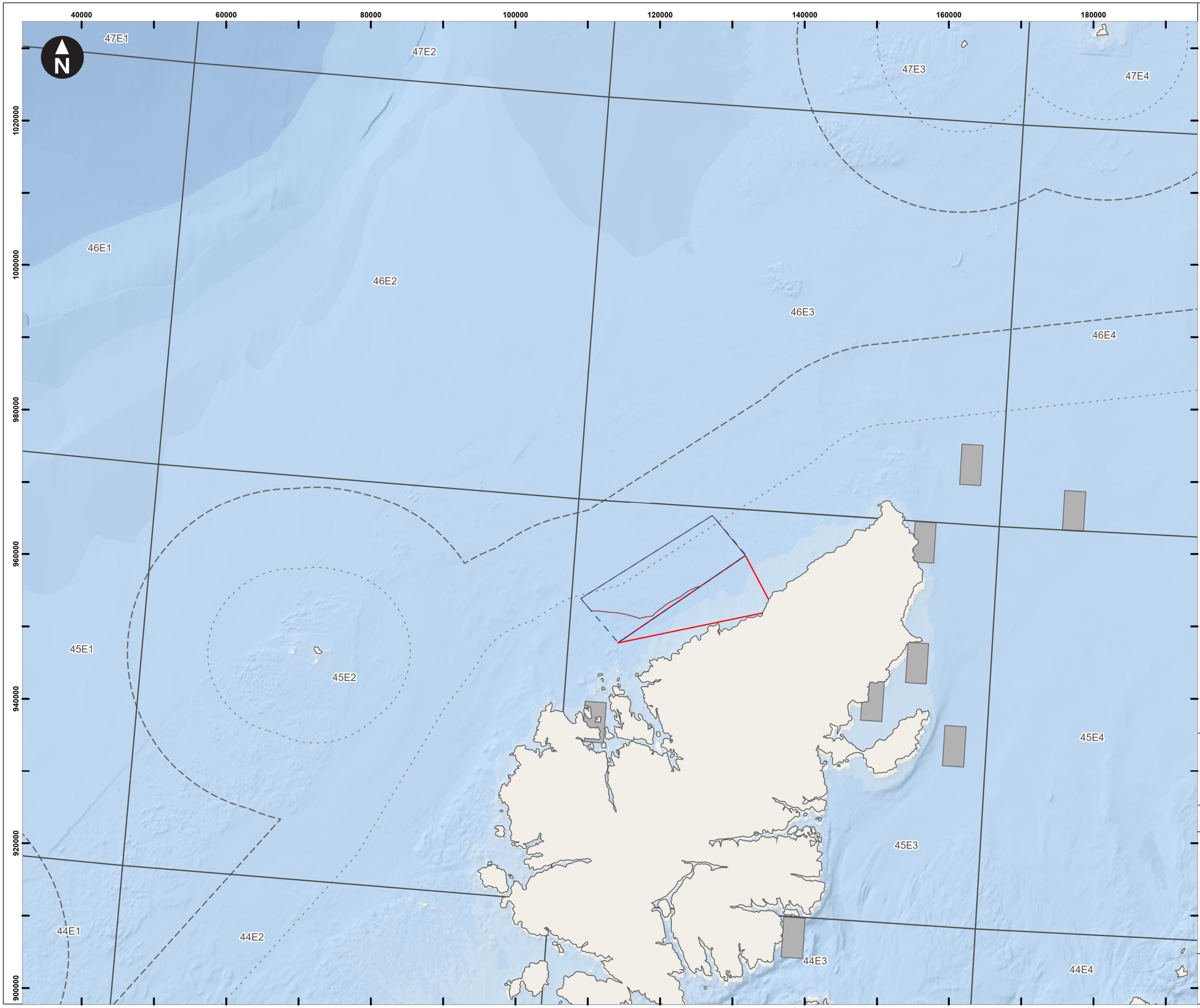
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.29
Rod and Line Average Annual Value, Scottish Under 12m Vessels (Data from 2017-2021)

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.29	

Plate 7-30: Set Nets Average Annual Value, Scottish Under 12 m Vessels (Data from 2017-2021) (Source: Marine Directorate, 2023)



Key

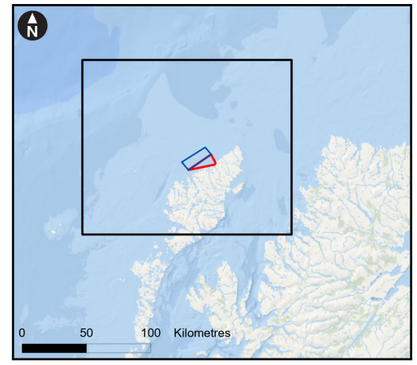
- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Set Nets Under12m 2017-2021

Set Nets (under 12m vessels)

- Under 5 vessels
- £0.01 - £2,000.00
- £2,000.01 - £5,000.00
- £5,000.01 - £20,000.00
- £20,000.01 - £50,000.00
- Greater than £50,000

Data source: Marine Directorate, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

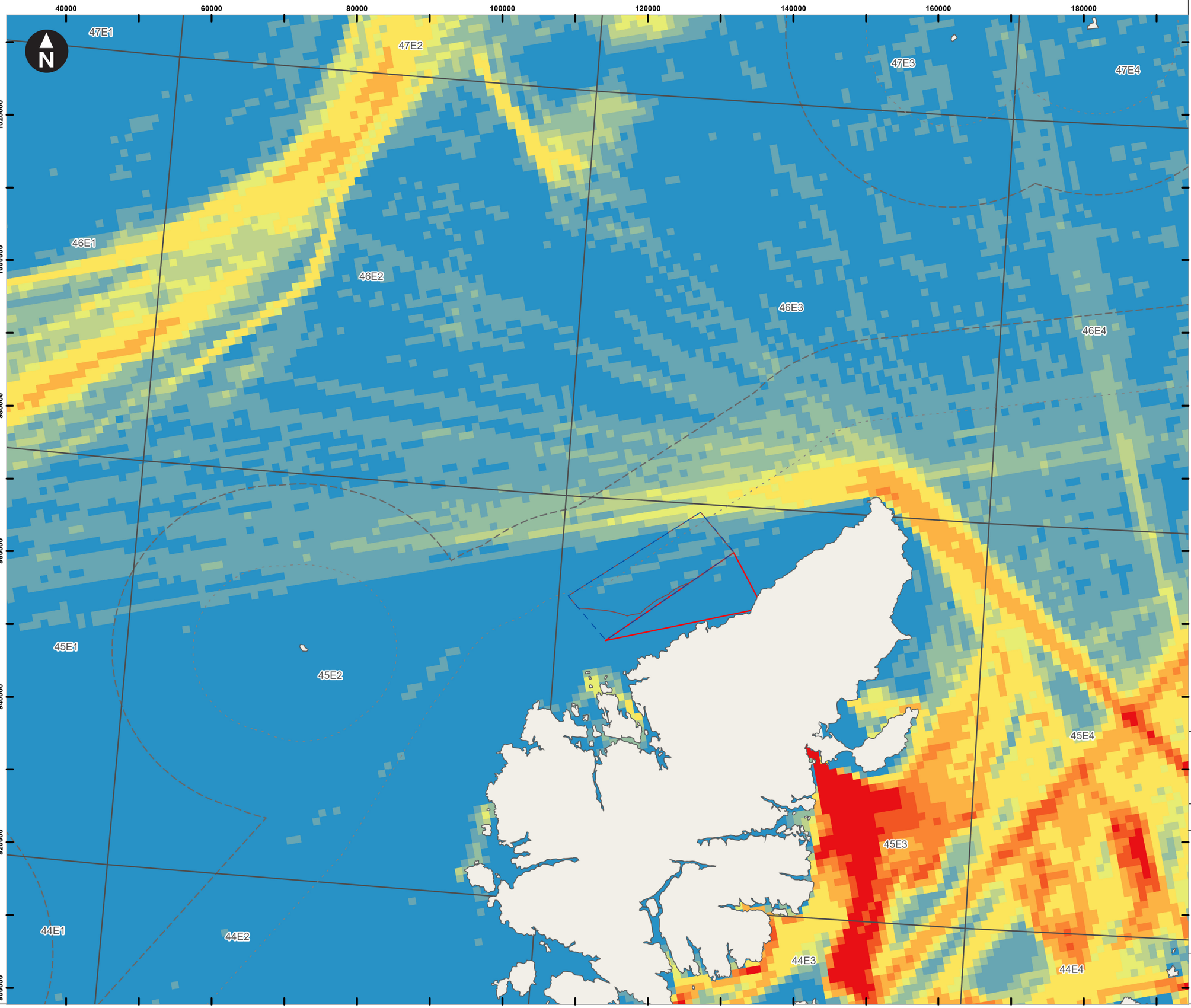
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.30
Set Nets Average Annual Value, Scottish Under 12m Vessels (Data from 2017-2021)

Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.30	

Plate 7-31: Automatic Identification System Data Fishing Vessel Route Density Routes per km² per Year, 2023 (Source: EMSA, 2023)



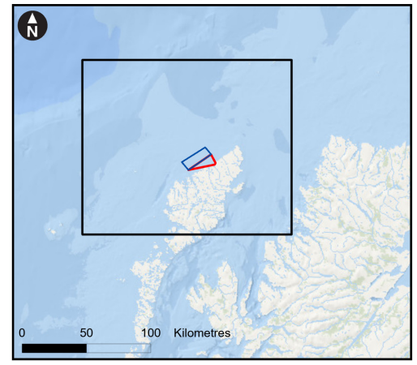
Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Fishing Vessel Route Density (2023)
(Routes per Square km per Year)

- 0 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 16,363

Data source: Marine Directorate, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

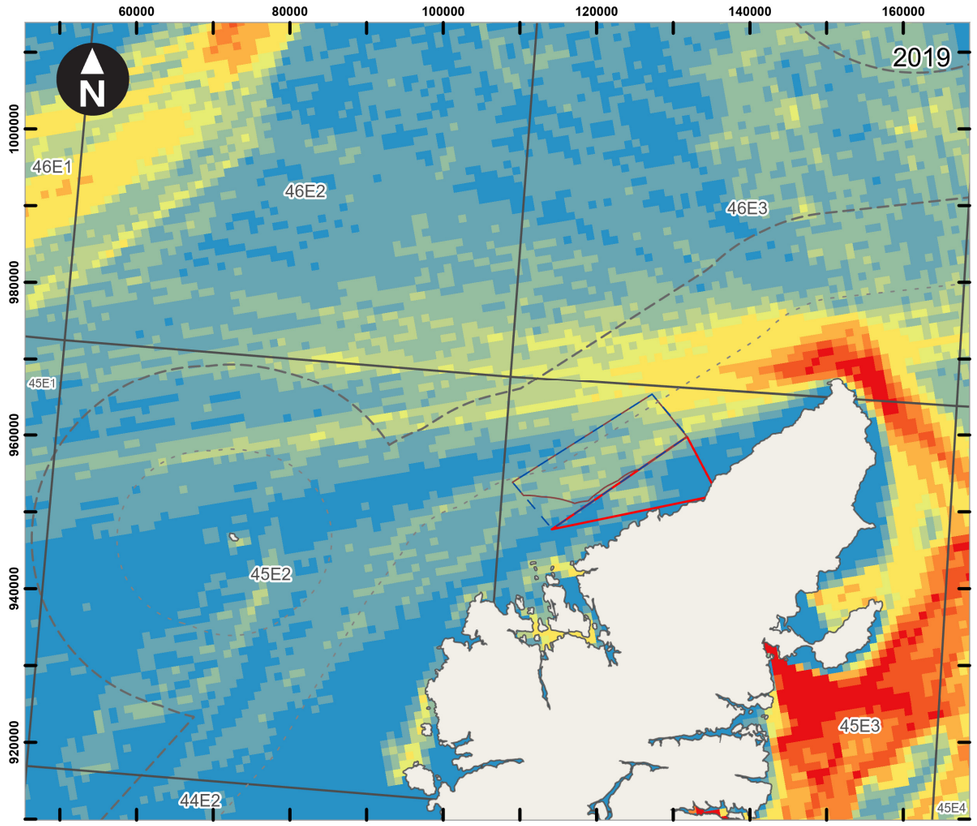
Drawn: FN Checked: SM Approved: LB

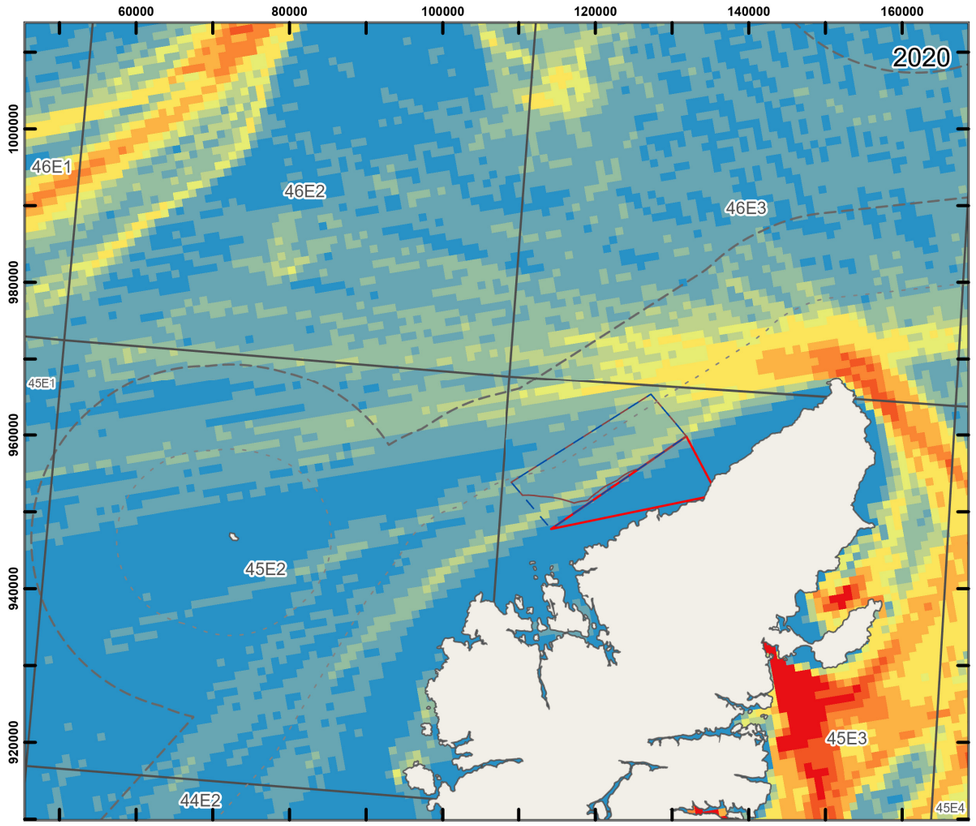
Spiorad na Mara Offshore Wind farm

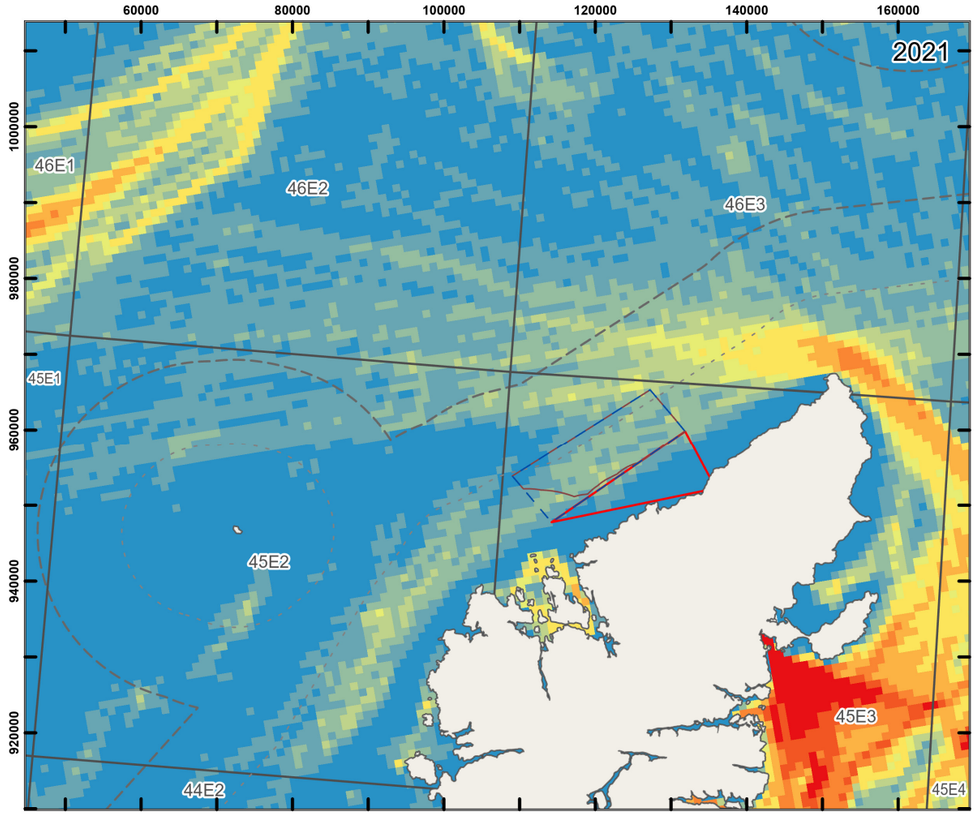
Figure 7.31
Automatic Identification System Data Fishing Vessel Route Density Routes per Square km^2 per Year, 2023

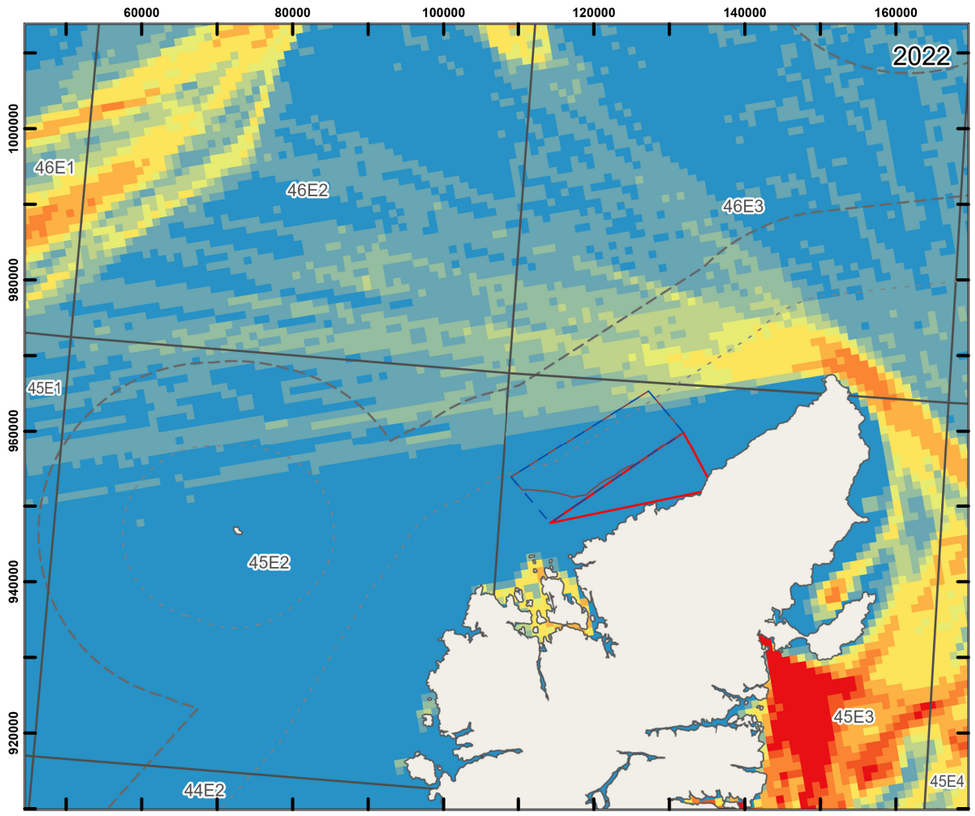
Document Number	13/03/2025
70103316-WSPE-NIMA-CF-TR-7.31	

Plate 7-32: Automatic Identification System Data Fishing Vessel Route Density Routes per km² per Year, 2019-2022 (Source: EMSA, 2023)









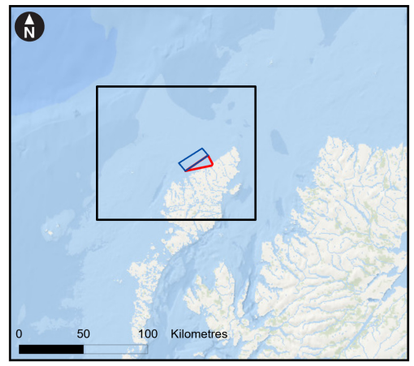
Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Fishing Vessel Route Density (2019)
(Routes per Square km per year)

- 0 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 15,661

Data source: MMO, 2023



0 9 18 27 36 Kilometres

Scale at A3: 1:800,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

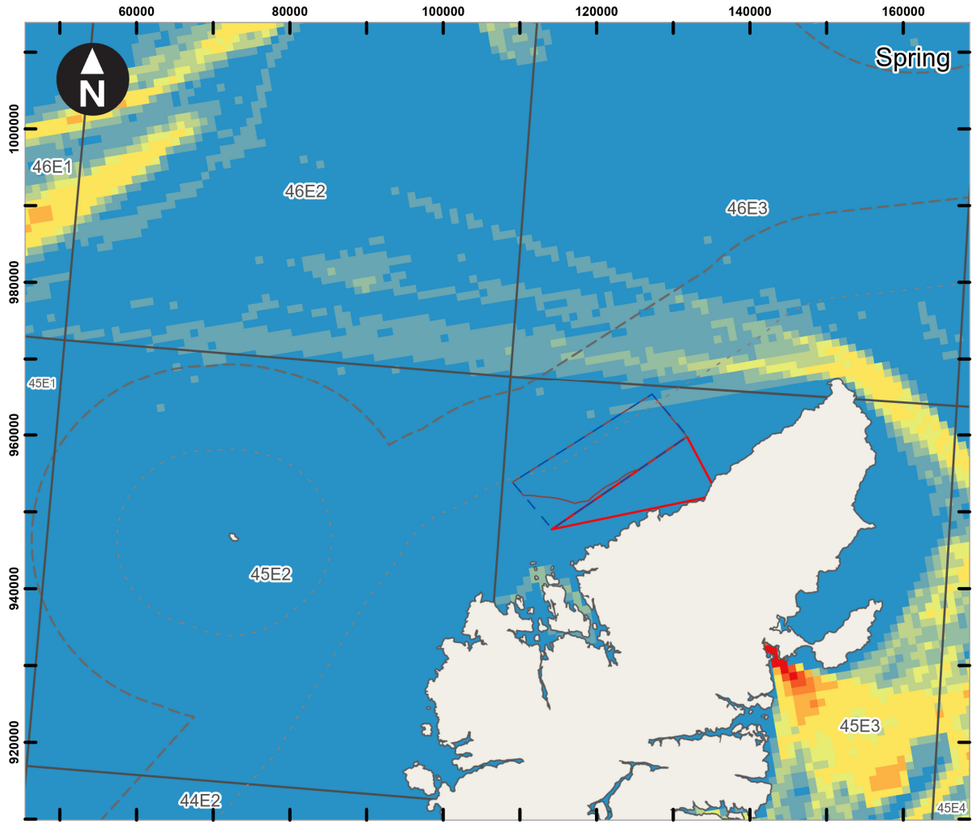
Spiorad na Mara Offshore Wind farm

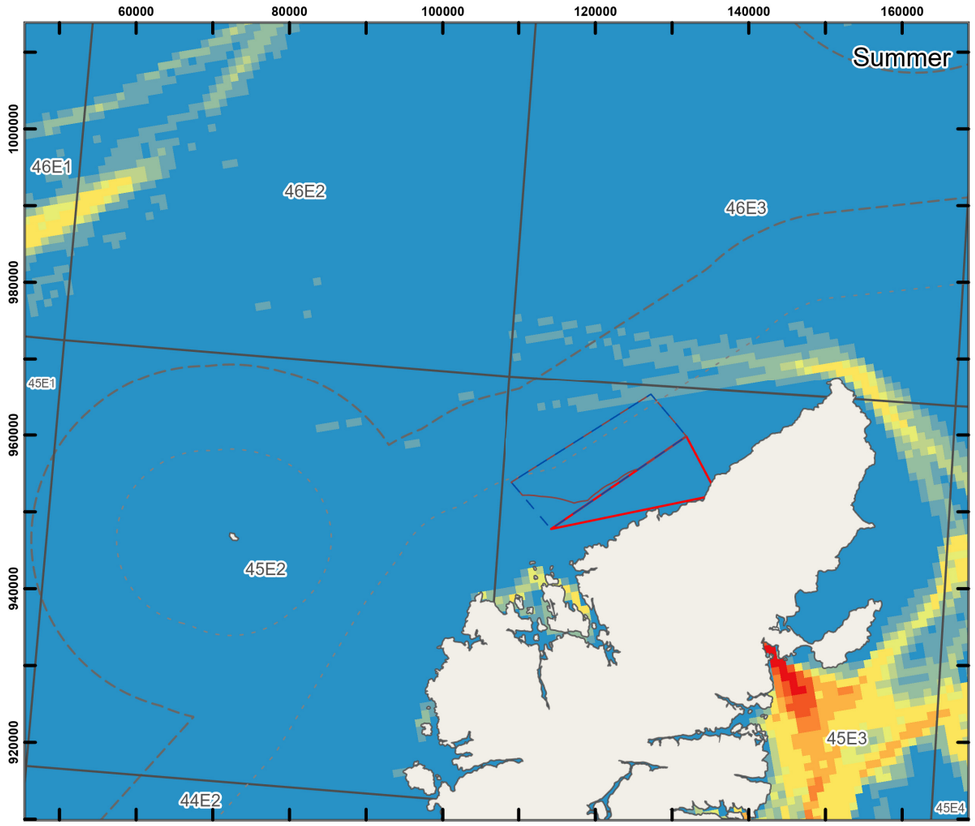
Figure 7.32
Automatic Identification System Data Fishing Vessel Route Density Routes per Square km² per Year, 2019-2022

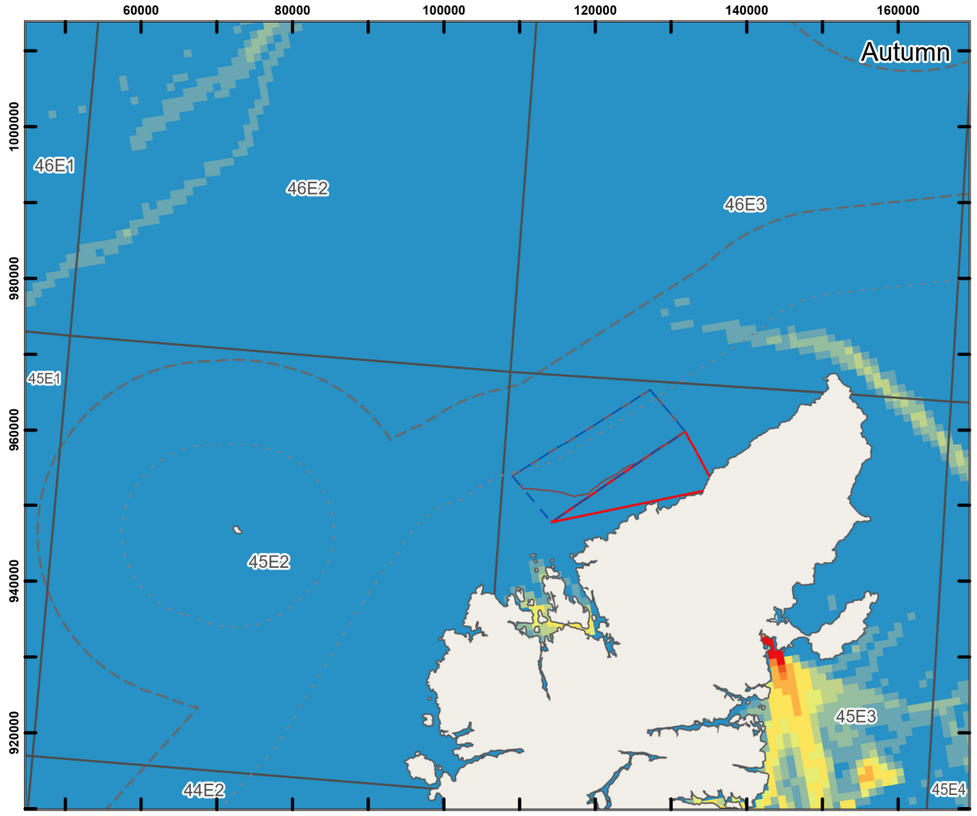
Document Number
70103316-WSPE-NIMA-CF-TR-7.32

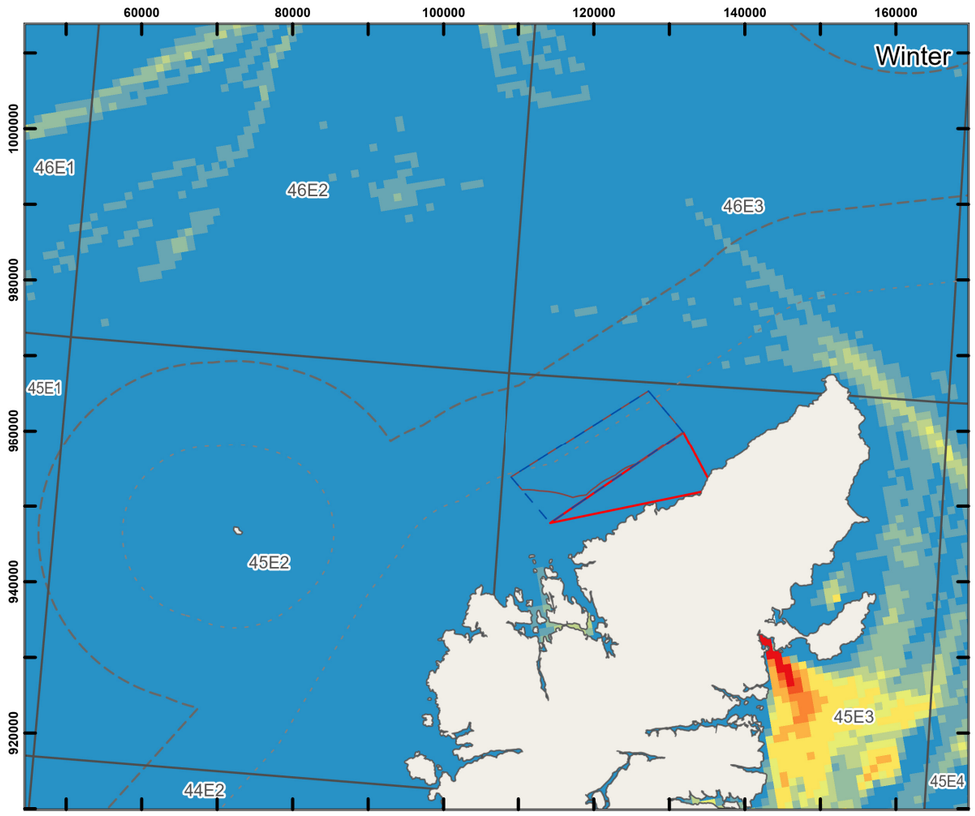
13/03/2025

Plate 7-33: Automatic Identification System Data Fishing Vessel Route Density Routes per km² per Season, 2022 (Source: EMSA, 2023)









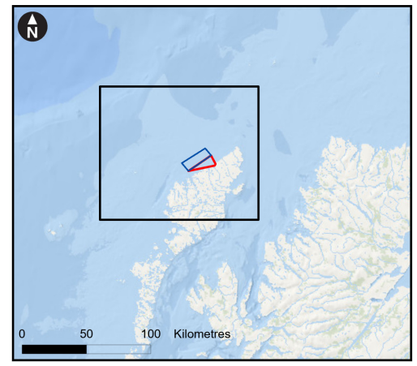
Key

- Array area
- Turbine area
- Offshore cable corridor area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Fishing Vessel Route Density (spring 2022)
(Routes per Square km per year)

- 0 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 16,363

Data source: MMO, 2023



0 9 18 27 36 Kilometres

Scale at A3: 1:800,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.33
Automatic Identification System Data Fishing Vessel Route Density Routes per Square km² per Season, 2022

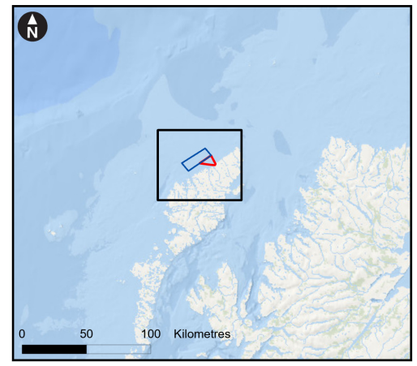
Document Number
70103316-WSPE-NIMA-CF-TR-7.33

13/03/2025

Plate 7-34: Location of potting gear recorded during scouting surveys (Source: FLO, 2025)

100000
120000
140000
960000
940000
N

Key
- Array area
- Turbine area
- Offshore cable area of search
- 6 NM limit
- 12 NM limit
- Location of potting gear



0 2 4 6 8 Kilometres

Scale at A3: 1:200,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.34
Location of Potting Gear Recorded During Scouting Surveys

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.34	

Plate 7-35: Demersal Trawl Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

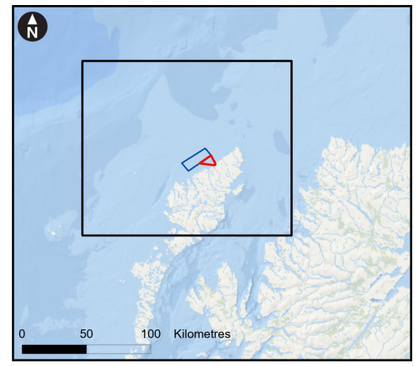
- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Demersal trawl fishing effort

Fishing hours (2012-2021)

- 1.3 - 10.0
- 10.1 - 25.0
- 25.1 - 50.0
- 50.1 - 100.0
- 100.1 - 150.0
- 150.1 - 250.0
- 250.1 - 500.0
- 500.1 - 750.0
- 750.1 - 1,000.0
- 1,000.1 - 1,852.0

Data source: FiSMaDiM, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

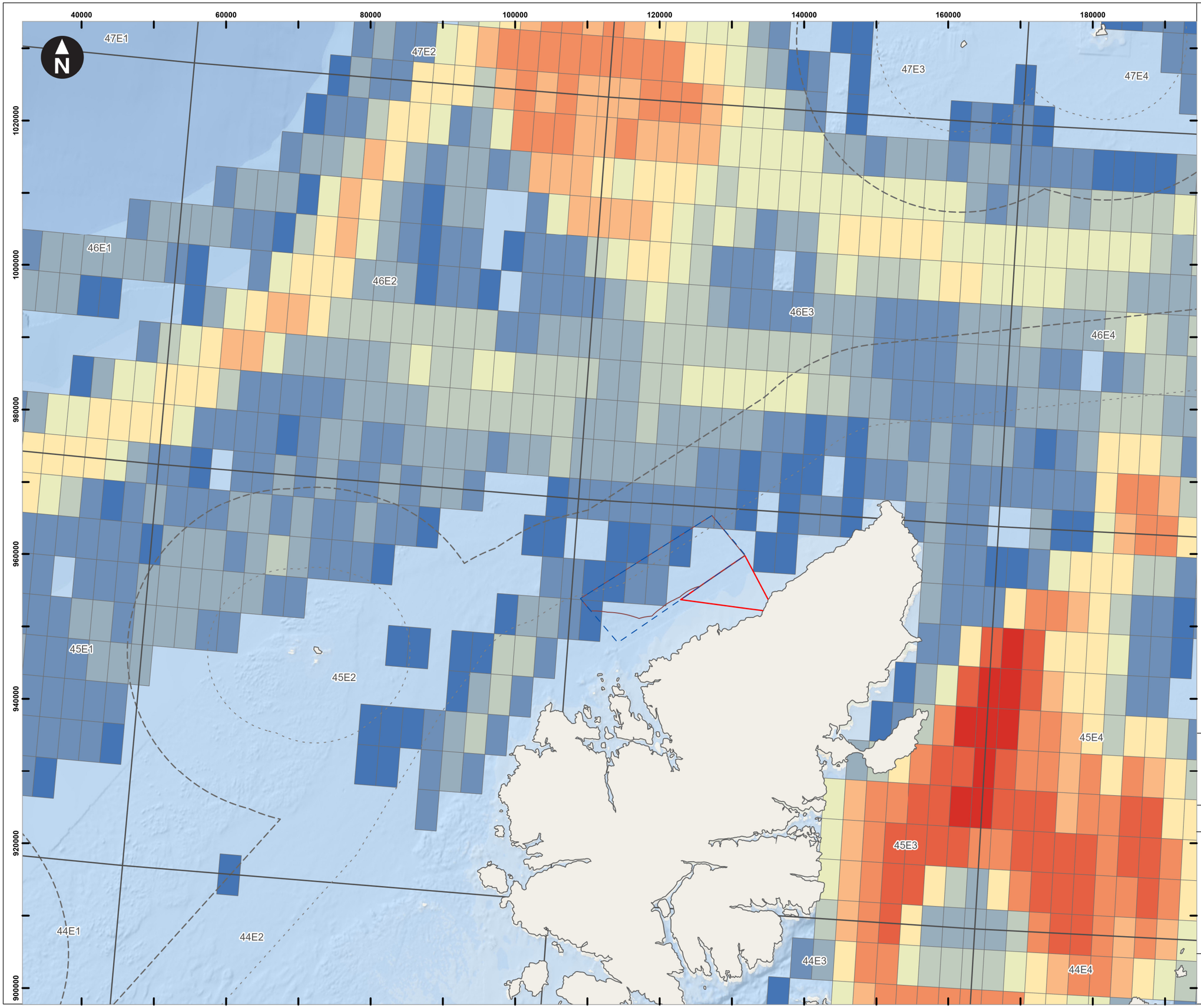
Figure 7.35
Demersal Trawl Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number

70103316-WSPE-NIMA-CF-TR-7.35

31/10/2025

Plate 7-36: Number of Demersal Trawl Vessels Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)



Key

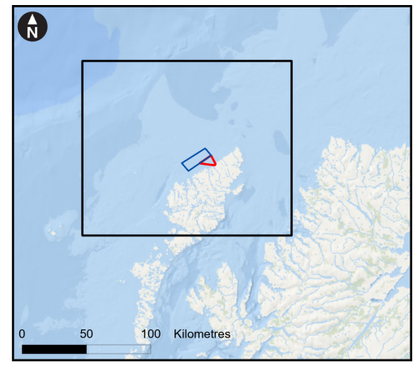
- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Demersal trawl fishing effort

Number of Vessels

- 4 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 75
- 76 - 100
- 101 - 141

Data source: FiSMaDiM, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.36
Number of Demersal Trawl Vessels Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number

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31/10/2025

Plate 7-37: Demersal Seine Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Demersal seine fishing effort

Fishing hours (2012-2021)

- 1.3 - 10.0
- 10.1 - 25.0
- 25.1 - 50.0
- 50.1 - 100.0
- 100.1 - 150.0
- 150.1 - 250.0
- 250.1 - 500.0
- 500.1 - 750.0
- 750.1 - 1,000.0
- 1,000.1 - 1,408

Data source: FiSMaDiM, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.37
Demersal Seine Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number	31/10/2025
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Plate 7-38: Number of Demersal Seine Vessels Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Demersal seine vessels

Number of vessels

- 4 - 5
- 6 - 7
- 8 - 9
- 10 - 11
- 12 - 13
- 14 - 15
- 16 - 17
- 18 - 20
- 21 - 25
- 26 - 28

Data source: FiSMaDiM, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

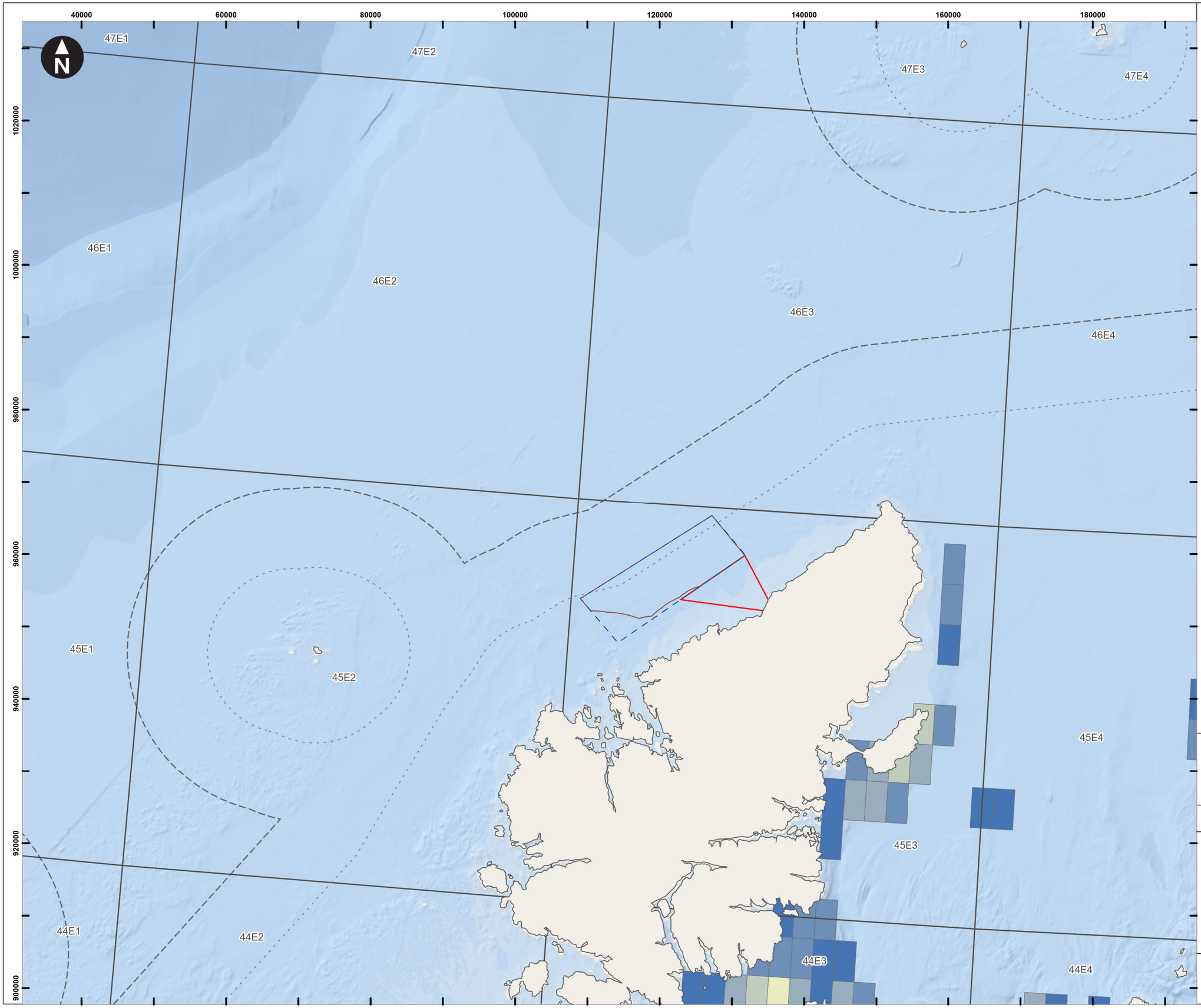
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.38
Number of Demersal Seine Vessels Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.38	

Plate 7-39: Dredge Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)



Key

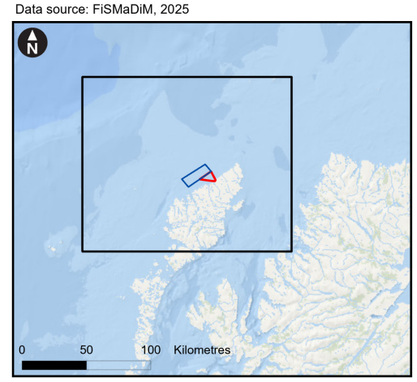
- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Dredge fishing effort

Fishing hours (2012-2021)

- 1.3 - 10.0
- 10.1 - 25.0
- 25.1 - 50.0
- 50.1 - 75.0
- 75.1 - 100.0
- 100.1 - 150.0
- 150.1 - 500.0
- 500.1 - 1,000.0
- 1,000.1 - 2,000.0
- 2,000.1 - 3,089.0

Data source: FiSMaDiM, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.39
Dredge Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number	31/10/2025
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Plate 7-40: Number of Dredge Vessels Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)

40000 60000 80000 100000 120000 140000 160000 180000

1020000 1000000 980000 960000 940000 920000 900000

47E1 47E2 47E3 47E4

46E1 46E2 46E3 46E4

45E1 45E2 45E3 45E4

44E1 44E2 44E3 44E4

Key

- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Dredge fishing effort

Number of vessels

- 4 - 5
- 6 - 7
- 8 - 10
- 11 - 12
- 13 - 15
- 16 - 20
- 21 - 50
- 51 - 75
- 76 - 100
- 101 - 123

Data source: FiSMaDiM, 2025

0 50 100 Kilometres

0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

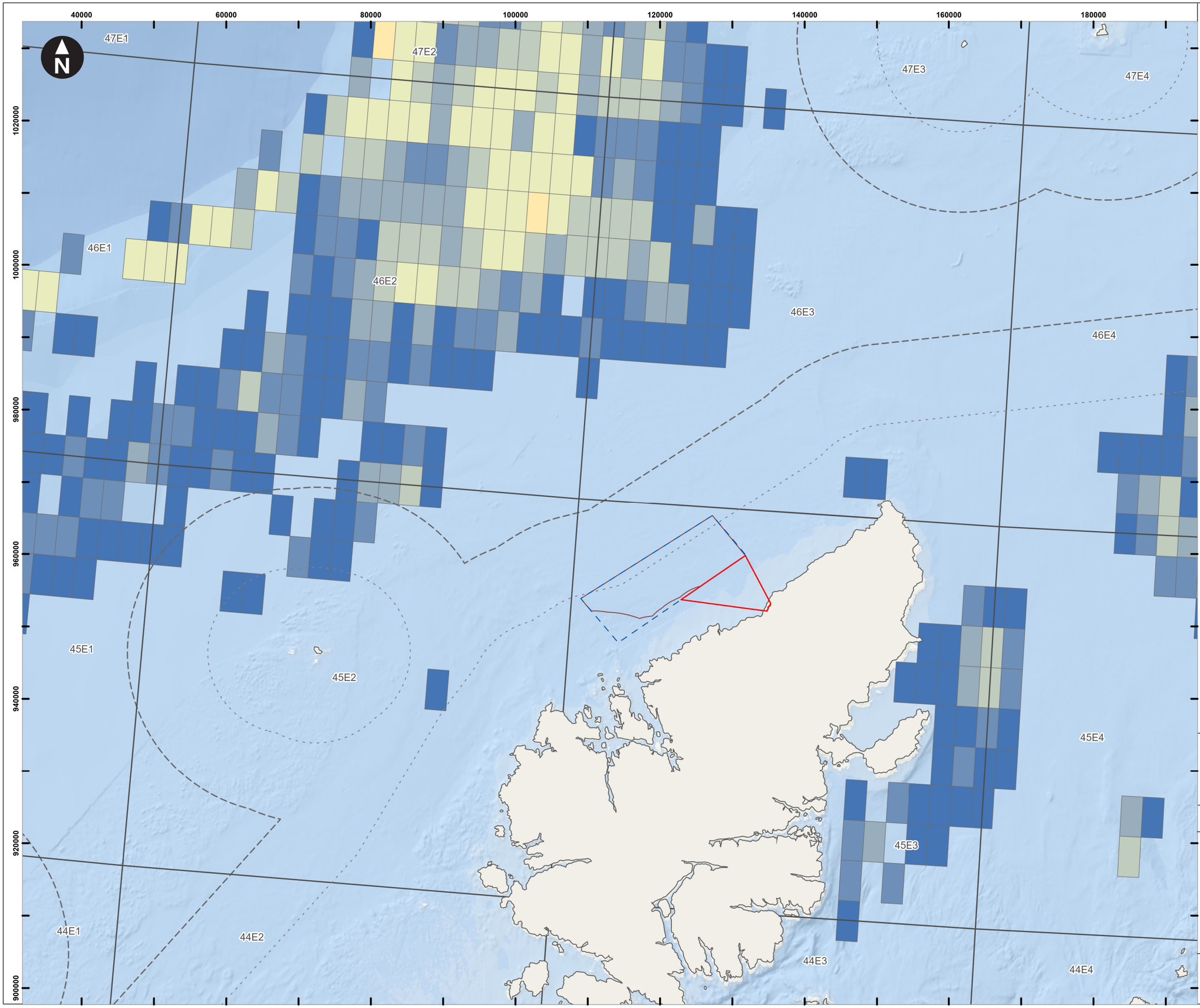
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.40
Number of Dredge Vessels Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.40	

Plate 7-41: Pelagic Trawl Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)



Key

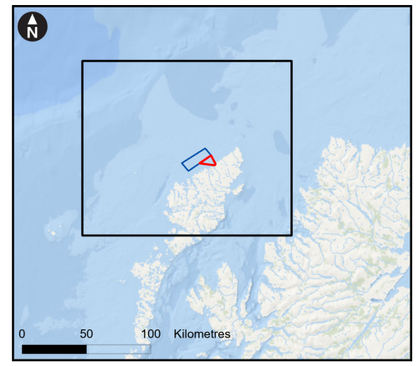
- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Pelagic midwater trawl fishing effort

Fishing hours (2012-2021)

- 1.3 - 4.0
- 4.1 - 6.0
- 6.1 - 8.0
- 8.1 - 10.0
- 10.1 - 25.0
- 25.1 - 50.0
- 50.1 - 75.0
- 75.1 - 100.0
- 100.1 - 150.0
- 150.1 - 328.0

Data source: FiSMaDiM, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World_Hillshade: Esri, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

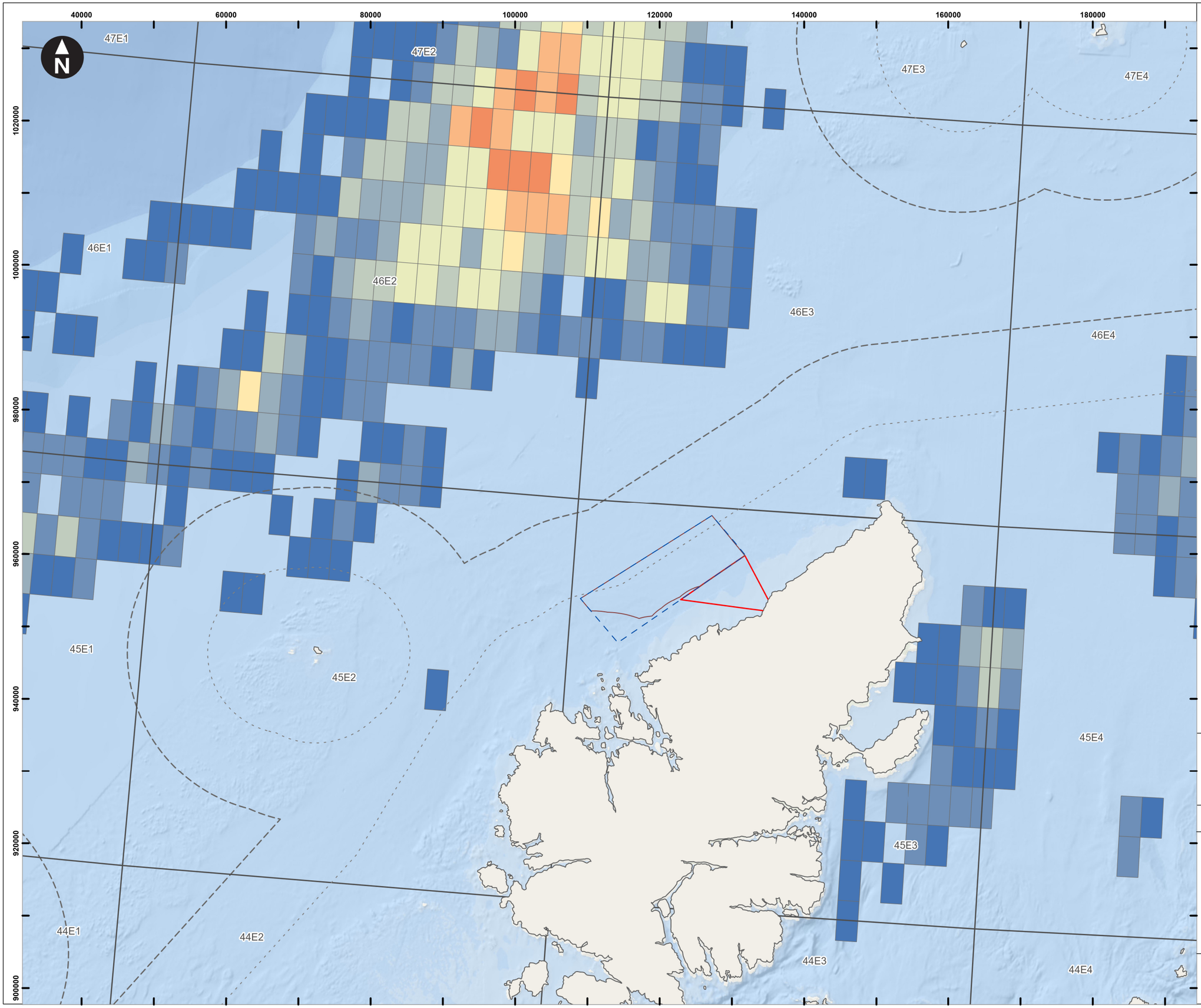
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.41
Pelagic Trawl Fishing Effort (Hours)
Based on FiSMaDiM Data
(Cumulative 2012-2021)

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.41	

Plate 7-42: Number of Pelagic Trawl Vessels Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)



Key

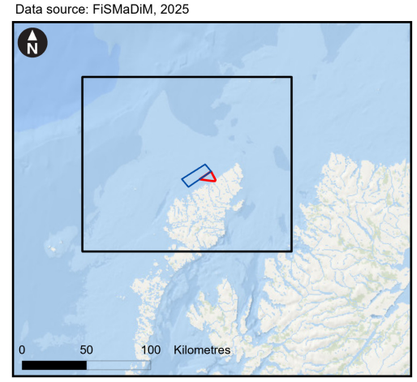
- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Pelagic midwater trawl fishing effort

Number of vessels

- 4 - 5
- 6 - 7
- 8 - 9
- 10 - 11
- 12 - 14
- 15 - 16
- 17 - 19
- 20 - 21
- 22 - 24
- 25 - 27

Data source: FiSMaDiM, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

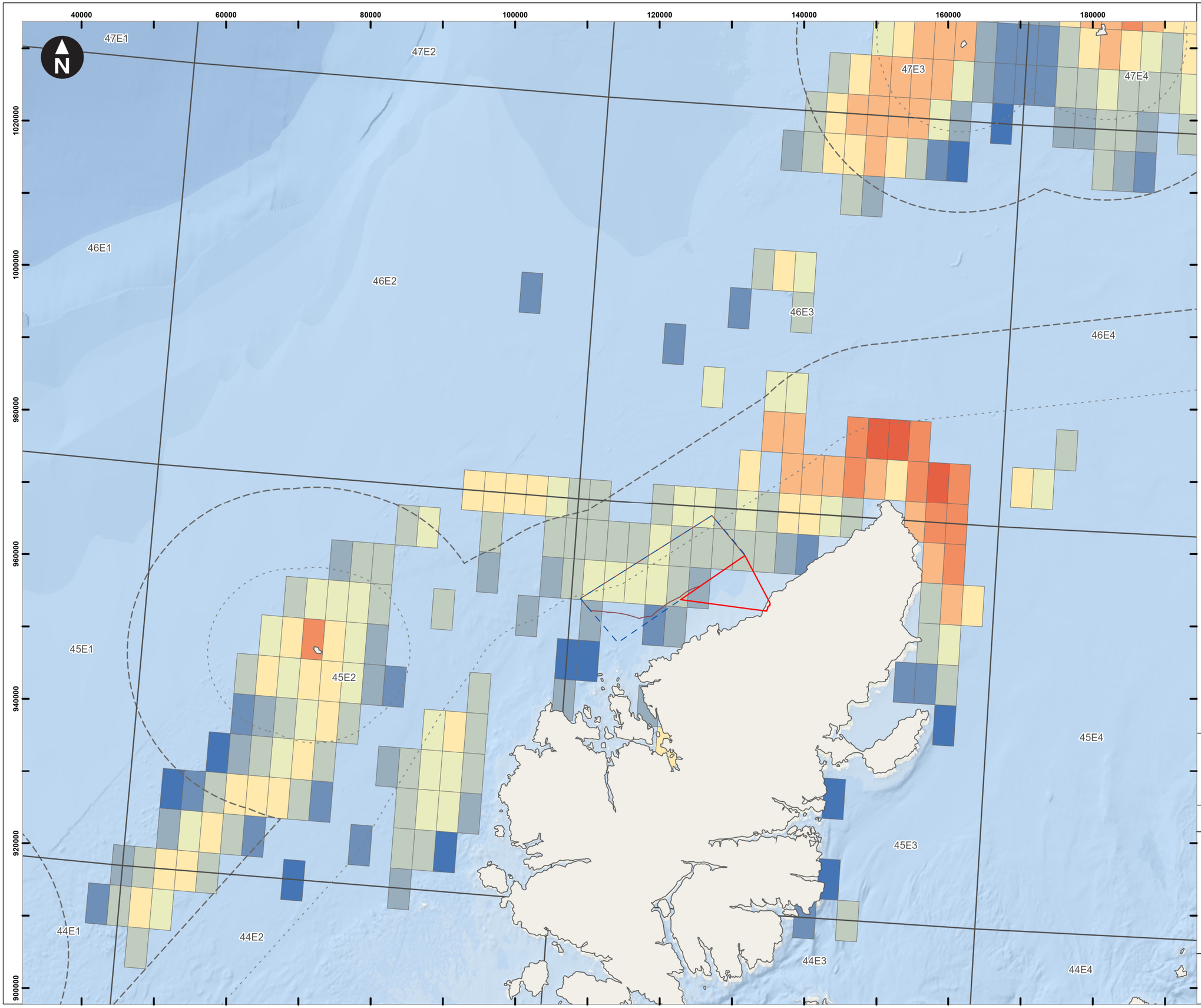
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.42
Number of Pelagic Trawl Vessels Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.42	

Plate 7-43: Potting Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)



Key

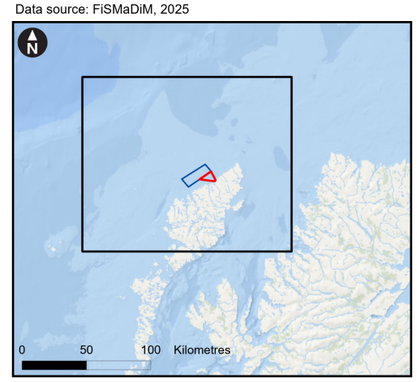
- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Potting fishing effort

Fishing hours (2012-2021)

- 1.3 - 10.0
- 10.1 - 25.0
- 25.1 - 50.0
- 50.1 - 100.0
- 100.1 - 150.0
- 150.1 - 250.0
- 250.1 - 500.0
- 500.1 - 750.0
- 750.1 - 1500.0
- 1500.1 - 3311.7

Data source: FiSMaDiM, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

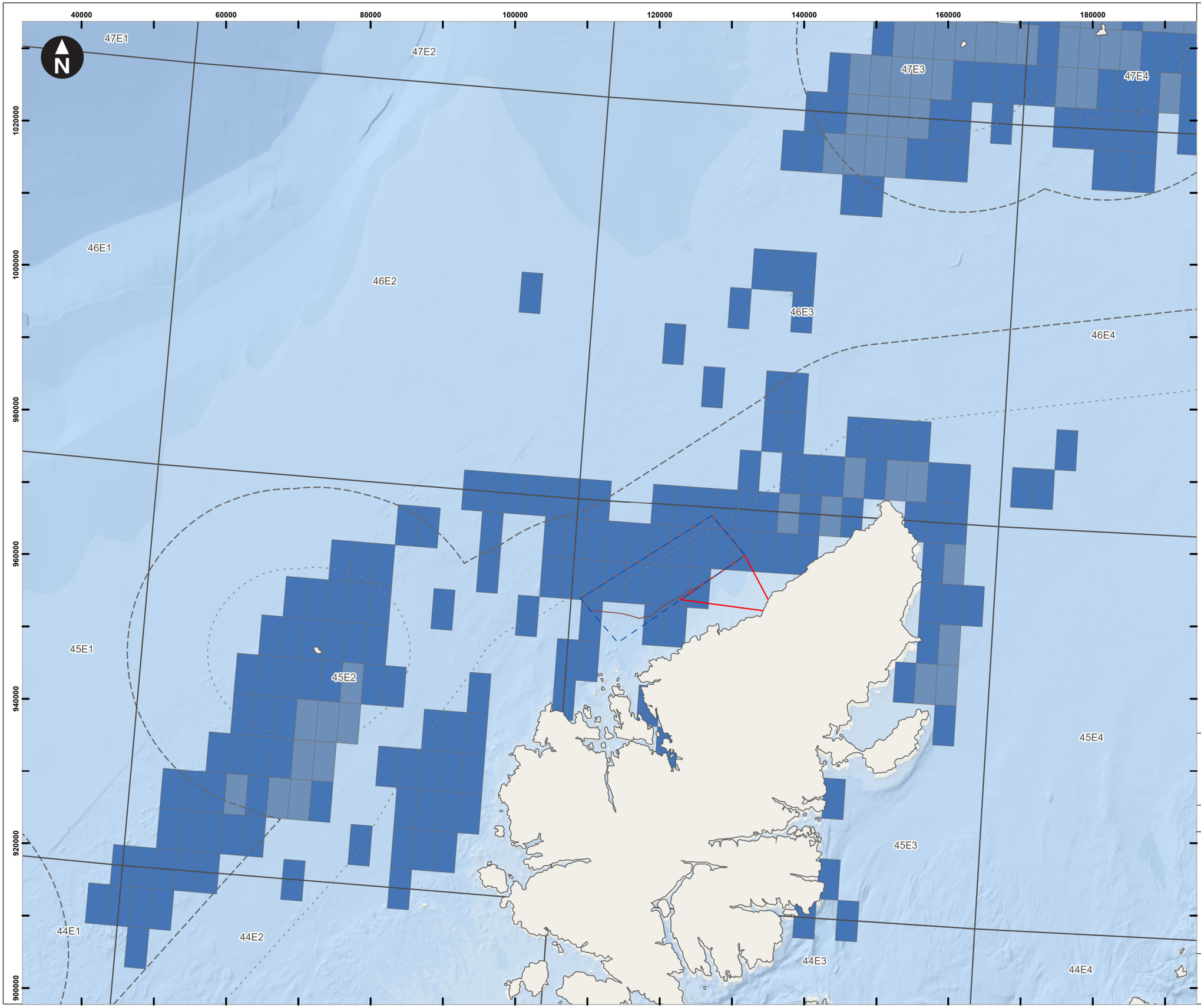
Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.43
Potting Fishing Effort (Hours)
Based on FiSMaDiM Data
(Cumulative 2012-2021)

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.43	

Plate 7-44: Number of Potting Vessels Based on FiSMaDiM Data (Cumulative 2012-2021) (Source: FiSMaDiM, 2025)



Key

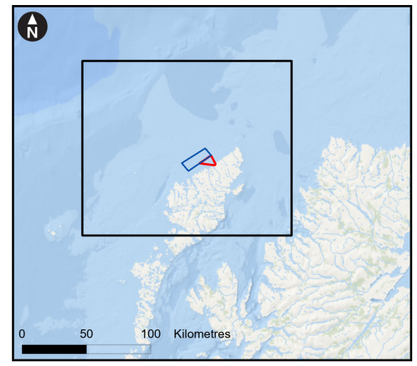
- Array area
- Turbine area
- Offshore cable area of search
- ICES statistical rectangles
- 6 NM limit
- 12 NM limit

Potting fishing effort

Number of vessels

- 4 - 5
- 6 - 7
- 8 - 9
- 10 - 12
- 13 - 14
- 15 - 17
- 18 - 19
- 20 - 22
- 23 - 24
- 25 - 28

Data source: FiSMaDiM, 2025



0 5.5 11 16.5 22 Kilometres

Scale at A3: 1:500,000

World Topographic Map: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World_Hillshade: Esri, USGS

Drawn: FN Checked: SM Approved: LB

Spiorad na Mara Offshore Wind farm

Figure 7.44
Number of Potting Vessels Based on FiSMaDiM Data (Cumulative 2012-2021)

Document Number	31/10/2025
70103316-WSPE-NIMA-CF-TR-7.44	

8 FUTURE BASELINE

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

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

8.1.1.2 The variations and trends in Commercial Fisheries activity are an important aspect of the baseline assessment and forms the principal reason for considering up to 5 years of key baseline data. Given the time periods assessed, the future baseline scenario would typically be reflected within the current baseline assessment undertaken.

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

8.1.1.4 25% of the EU's fisheries quota in UK waters will be transferred to the UK over the 5 year transition period; most of this quota has already been transferred and distributed across the 4 nations of the UK. After the 5 year transition there will be annual discussions on fisheries opportunities. Across the Commercial Fisheries regional study area, where UK fisheries primarily target non-quota shellfish species, it is expected that fleets are unlikely to be impacted by quota transfers. It is possible that UK vessels will seek to exploit additional quota-species opportunities, but vessels would need to access quota holdings.

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

9 SUMMARY

9.1.1.1 The key fleet metiers operating across the Commercial Fisheries local and regional study areas include (in no particular order):

- UK potting vessels targeting brown crab, lobster, velvet crab and ballan wrasse;
- UK vessels using line to target mackerel;
- UK divers targeting razor clam and king scallop;
- UK pelagic trawlers targeting herring, mackerel and horse mackerel;
- UK demersal otter trawlers targeting nephrops, haddock and mixed demersal species;
- UK scallop dredgers targeting king scallop.

9.1.1.2 This technical report reviewed all datasets available to characterise the Commercial Fisheries activity across the Commercial Fisheries local and regional study areas and wider west of Scotland/*Alba*.

9.1.1.3 Given the range of datasets assessed and the comprehensive analysis undertaken, it is considered that this technical report is adequate for the purposes of an EIA.

10 GLOSSARY OF TERMS AND ABBREVIATIONS

10.1.1.1 A list of key terms and acronyms used in this Appendix are provided in **Table 10-1** and **Table 10-2**.

Table 10-1 Acronyms and abbreviations

Term	Definition
AIS	Automatic Identification System
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
DCF	Data Collection Framework
ECC	Export Cable Corridor
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMSA	European Maritime Safety Agency
EU	European Union
FiSMaDiM	Fisheries Sensitivity Mapping and Displacement Modelling
FLO	Fisheries Liaison Officer
FU	Functional Unit
GIS	Geographic Information System
ICES	International Council for the Exploration of the Sea
IFG	Inshore Fishery Group
MCRS	Minimum Conservation Reference Size
MMO	Marine Management Organisation
OCAS	Offshore Cable Area of Search
OHRIFG	Outer Hebrides Regional Inshore Fishery Group
MSY	Maximum Sustainable Yield
NMPi	National Marine Plan interactive
NRA	Navigational Risk Assessment
PLN	Port letters and numbers
RBS	Register of Buyers and Sellers
SAR	Swept Area Ratio
SPFA	Scottish Pelagic Fishermen's Association
TAC	Total Allowable Catch
TCA	Trade and Cooperation Agreement
UK	United Kingdom
VMS	Vessel Monitoring System
WTG	Wind Turbine Generator

Table 10-2 Glossary

Term	Meaning
the Applicant	Spiorad na Mara Limited (the Project owner)
Array Area	Total area within which offshore wind turbine generators, associated foundations, array cables and offshore substations platform (OSP) (if required) will be located.
Brexit	The withdrawal of the United Kingdom (UK) from the European Union (EU).
Bycatch	Catch which is retained and sold but is not the target species for the fishery.
Carapace	The hard upper shell of a crustacean.
COVID-19 pandemic	The COVID-19 pandemic was a global outbreak of coronavirus, an infectious disease caused by the severe acute respiratory syndrome coronavirus, first identified in 2019.
Creel	Creel is typically a Scottish term for a pot or trap deployed by an inshore vessel. Pots and traps are generally rigid structures into which fish or shellfish are guided or enticed through funnels that make entry easy but from which escape is difficult. There are many different styles and designs, each one has been designed to suit the behaviour of its target species.
Demersal	Living on or near the seabed.
Demersal trawl	A fishing net used by towing the trawl along or close to the seabed.
Dhan	A marker flag made of very hard wearing material located on a pole or buoy to mark location of fishing gear.
N4	The ScotWind Plan Option Area within the proposed development is located.
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an EIA Report (EIAR).
EIAR	The Environmental Impact Assessment Report (EIAR) prepared to assess the likely significant effects of the Project on the environment. Do not use EIA Report within the EIAR.
Fish stock	Any natural population of fish which an isolated and self-perpetuating group of the same species.
Fishery	A group of vessel voyages which target the same species or use the same gear.
Fishing ground	An area of water or seabed targeted by fishing activity.
Fishing mortality	Mortality due to fishing; death or removal of fish from a population due to fishing.
Fleet	A physical group of vessels sharing similar characteristics (e.g. nationality).

Term	Meaning
Gadoids	From the Gadidae family of marine fish, included in the order Gadiformes, known as the cods, codfishes, or true cods, including cod, haddock, whiting, and pollock.
Gear type	The method/equipment used for fishing.
Gear type TR1	A classification of gear type that includes bottom trawls, Danish seines and similar towed gear, excluding beam trawls, of mesh size greater than or equal to 100 millimetres (mm). Gears of this type are typically used to target whitefish, including cod.
Gear type TR2	A classification of gear type that includes bottom trawls, Danish seines and similar towed gear, excluding beam trawls, of mesh size greater than or equal to 70 mm and less than 100 mm. Gears of this type are typically used to target nephrops, but may also catch significant amounts of cod.
Horizontal Directional Drilling (HDD)	A trenchless crossing engineering technique using a drill steered underground without the requirement for open trenches. This method is able to carry out the underground installation of pipes and cables with minimal surface disruption.
iFish database	The Marine Management Organisation (MMO) fisheries database of commercial fisheries landings statistics for vessels registered in the UK.
Industrial fishery	Highly mechanised commercial fishing operations whose ultimate products are principally fish meal and fish oil.
International Council for the Exploration of the Seas (ICES) statistical rectangles	ICES standardise the division of sea areas to enable statistical analysis of data. Each ICES statistical rectangle is '30 minutes latitude by 1 degree longitude' in size (approximately 30 x 30 nautical miles). A number of rectangles are amalgamated to create ICES statistical areas.
Landfall	This consists of works from offshore Horizontal Directional Drill (HDD) exit pits to onshore at the Transition Joint Bays (TJB). The infrastructure and installation methods associated with the Landfall involves both onshore and offshore components.
Landing obligation	A regulation first introduced in 2015 and fully in force since January 2019 meaning that no commercial fishing vessel can return any quota species of any size to the sea once caught. This includes slipping or discarding the catch. Once caught, all quota species must be landed and counted against quota. This applies to all UK vessels of all lengths, unless an exemption has been granted e.g. based on species survivability.
Landings	Quantitative description of amount of fish returned to port for sale, in terms of value or weight.
Maximum Sustainable Yield	Maximum sustainable yield (MSY) is the largest yield (catch, in tonnes) that can be taken from a specific fish stock over an indefinite period under constant environmental conditions. Fishing at MSY levels should ensure the capacity of the stock to continue to produce this level in the long term.

Term	Meaning
Métier	A homogenous subdivision, either of a fishery by vessel type or a fleet by voyage type.
Minimum Conservation Reference Size (MCRS)	A technical measure that limits the size of fish or shellfish species that can be legally landed and sold. The MCRS varies per species.
Offshore Cable Area of Search	The area within which the offshore cable infrastructure between the Array Area and Landfall will be located.
Offshore export cables	The offshore cables connecting the Offshore Substation Platform (OSP) to Landfall
Otter trawl	A net with large rectangular boards (otter boards) which are used to keep the mouth of the trawl net open. Otter boards are made of timber or steel and are positioned in such a way that the hydrodynamic forces, acting on them when the net is towed along the seabed, pushes them outwards and prevents the mouth of the net from closing.
Pelagic	Of or relating to the open sea.
Pelagic trawl	A net used to target fish species in the mid water column.
Project	To describe the Project as a whole, this includes all offshore and onshore components of the Project.
Quota	A proportion of the Total Allowable Catch for a fish stock.
Recruitment	Recruitment can be defined as the number of fish surviving to enter the fishery or to some life history stage such as settlement or maturity.
Scallop dredge	A method to catch scallop using steel dredges with a leading bar fitted with a set of spring loaded, downward pointing teeth. Behind this toothed bar (sword), a mat of steel rings is fitted. A heavy net cover (back) is laced to the frame, sides and after end of the mat to form a bag.
Spawning	The act of releasing or depositing eggs (fish).
Spawning stock biomass	The combined weight (in tonnes) of all the fish of one specific stock that are old enough to spawn. It provides an indication of the status of the stock and the reproductive capacity of the stock.
Stock assessment	An assessment of the biological stock of a species and its status in relation to defined references points for biomass and fishing mortality.
Total Allowable Catch (TAC)	TACs are catch limits, expressed in tonnes or numbers, that are set for some commercial fish stocks.
Turbine Area	A reduced area within the array where above water surface infrastructure would be located i.e. WTG or OSP. Developed and refined through environmental assessment.
Vessel Monitoring System (VMS)	A system used in commercial fishing to allow environmental and fisheries regulatory organizations to monitor, minimally, the position, time at a position, and course and speed of fishing vessels.
Wind Turbine Generator (WTG)	The wind turbines that generate electricity consisting of tubular towers and blades attached to a nacelle housing mechanical and electrical generating equipment.

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