

# **Bellrock Offshore Wind Farm**

## **Wind Farm Development Area**

**Environmental Impact Assessment Report - Volume IV**

**Appendix 11.1: Commercial Fisheries Baseline Report**

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## Glossary of Terminology

Term	Definition
Applicant	Bellrock Offshore Wind Farm Limited, the legal entity submitting Section 36 Consent and Marine Licence applications for the Bellrock Wind Farm Development Area.
Automatic identification system	A system by which vessels automatically broadcast their identity and key statistics including location, destination, length, speed and current status. Most commercial vessels and European Union fishing vessels over 15 metres (m) in length are required to carry Automatic Identification System.
Beam trawl	A method of bottom trawling with a net that is held open by a beam, which is generally a heavy steel tube supported by steel trawl heads at each end. Tickler chains or chain mats, attached between the beam and the ground rope of the net, are used to disturb fish and crustaceans that rise up and fall back into the attached net.
Bellrock Offshore Wind Farm (or the Bellrock Project)	<p>An offshore wind farm capable of exporting up to 1.8 GW of renewable energy to the National Electricity Transmission System.</p> <p>The Wind Farm Development Area is located 120 km east of Stonehaven, and will connect to the National Electricity Transmission System at the proposed SSEN Transmission Hurlie substation, west of Stonehaven in Aberdeenshire. The Bellrock Offshore Wind Farm comprises of the following Development Areas:</p> <ul style="list-style-type: none"> <li>▪ Wind Farm Development Area;</li> <li>▪ Offshore Transmission Development Area; and</li> <li>▪ Onshore Transmission Development Area.</li> </ul>
Brexit	The withdrawal of the United Kingdom from the European Union.
Bycatch	Catch which is retained and sold but is not the target species for the fishery.
COVID-19 pandemic	The COVID-19 pandemic was a global outbreak of coronavirus, an infectious disease caused by the severe acute respiratory syndrome coronavirus, first identified in 2019.
Demersal	Living on or near the seabed.
Demersal seine	A seine net is a long net, with or without a bag in the centre, which is set either from the shore or from a boat for surrounding a certain area and is operated with two (long) ropes fixed to its ends (for hauling and herding the fish).
Dhan	A marker flag made of very hard-wearing material located on a pole or buoy to mark location of fishing gear.
Diel	Refers to a 24-hour period or event that occurs on a daily cycle, and is commonly used to describe the vertical migration of fish.
Fish stock	Any natural population of fish which is an isolated and self-perpetuating group of the same species.

<b>Term</b>	<b>Definition</b>
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).
Functional Unit	A Nephrops functional unit is a geographic area used for managing and reporting on Nephrops populations.
Gear type	The method/equipment used for fishing.
International Council for the Exploration of the Sea statistical rectangles	International Council for the Exploration of the Sea standardise the division of sea areas to enable statistical analysis of data. Each International Council for the Exploration of the Sea statistical rectangle is '30 min latitude by 1 degree longitude' in size (approximately 30 x 30 nautical miles). A number of rectangles are amalgamated to create International Council for the Exploration of the Sea statistical areas.
iFish database	The Marine Management Organisation fisheries database of commercial fisheries landings statistics for vessels registered in the United Kingdom.
Jigging	Jigging is a method of fishing that has evolved over many centuries, where hooks attached to artificial lures are used to attract and capture fish. The lures are designed to resemble small fish that the target species would normally feed on.
Landings	Quantitative description of amount of fish returned to port for sale, in terms of value or weight.
Maximum sustainable yield	Maximum sustainable yield 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 maximum sustainable yield levels should ensure the capacity of the stock to continue to produce this level in the long term.
Metier	A homogenous subdivision, either of a fishery by vessel type or a fleet by voyage type.
Minimum conservation reference size	For the protection and conservation of fisheries resources, minimum conservation reference size are applied to certain species of fish and shellfish. The minimum conservation reference size is the size of a living marine aquatic species below which restrictions or incentives apply that aim to avoid capture through fishing activity.
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.

<b>Term</b>	<b>Definition</b>
Pelagic trawl	A net used to target fish species in the mid water column.
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.
Scottish seine	An encircling net shot in the open sea using very long ropes to lay out the net, and ropes on the seabed prior to towing the net closed and hauling from a boat under its own power.
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.
String	A series of static fishing gear (pots) joined together to form a single deployable linear line of pots.
Swept area ratio	Swept area ratio (derived from Vessel Monitoring System data) indicates the number of times in an annual period that a fishing gear makes contact with (or sweeps) the seabed surface. Surface Swept area ratio provides a proxy for fishing intensity.
Total allowable catch	Total allowable catches are catch limits, expressed in tonnes or numbers, that are set for some commercial fish stocks.
Vessel monitoring system	A system used in commercial fishing to allow environmental and fisheries regulatory organisations to monitor, minimally, the position, time at a position, and course and speed of fishing vessels.
Vivier	Vivier crabbers are generally larger vessels with the ability to retain large numbers of live crab onboard in storage tanks.
Wind farm infrastructure	Infrastructure located within the Wind Farm Development Area including wind turbine generators; floating substructures, station keeping systems and associated scour protection; inter-array cables and associated cable protection; subsea cable hubs; and ancillary infrastructure including buoys (including activities associated with the Wind Farm Infrastructure construction, operation and maintenance, and decommissioning).
Wind turbine generator	A wind turbine generator converts wind energy into electrical energy. The main components include rotor assembly (composed of three blades and a hub); nacelle (containing the generator, shaft and gearbox, power electronic converter and transformer); and a tower (containing lifting equipment and switchgear).

## Glossary of Abbreviations

Term	Definition
AIS	Automatic identification system
Cefas	Centre for Environment, Fisheries and Aquaculture Science
DCF	Data collection framework
EEZ	Exclusive economic zone
EIA	Environmental impact assessment
EMSA	European Maritime Safety Agency
EU	European Union
FiSMaDiM	Fisheries Sensitivity Mapping and Displacement Modelling
FMSY	Fishing at Maximum Sustainable Yield
FU	Functional unit
GBP	Great British Pound
ICES	International Council for the Exploration of the Sea
MCRS	Minimum conservation reference size
MMO	Marine Management Organisation
MSY	Maximum sustainable yield
NMPi	National Marine Plan interactive
NRA	Navigational Risk Assessment
RBS	Register of Buyers and Sellers
SAR	Swept area ratio
SFF	Scottish Fishermen's Federation
SPFA	Scottish Pelagic Fishermen's Association
TAC	Total allowable catch
UK	United Kingdom
VMS	Vessel monitoring system
WFDA	Wind Farm Development Area

## Units

Term	Definition
£	Pound sterling
cm	Centimetres
Hp	Horsepower
kg	Kilograms
km	Kilometres
Knots	Nautical mile per hour
m	Metres
mm	Millimetres

# 1 Introduction

1. This Commercial Fisheries Baseline Report has been prepared by NiMa Consultants Limited (NiMa) to support **Chapter 11: Commercial Fisheries (Volume II)** of the Bellrock Wind Farm Development Area (WFDA) environmental impact assessment (EIA) Report.
2. This Commercial Fisheries Baseline Report provides a detailed characterisation of the commercial fisheries in operation across the Bellrock WFDA and wider study area. The information on commercial fisheries activity presented in this document is intended to inform the EIA for the Bellrock WFDA by providing a detailed understanding of the commercial fisheries baseline, against which the potential impacts of the Bellrock Wind Farm Infrastructure within the WFDA can be assessed.
3. This document describes commercial fisheries activity, defined as fishing activity legally undertaken where the catch is sold for taxable profit. The ecology of the fish and shellfish species targeted by commercial fishing activity is described in **Chapter 8: Fish and Shellfish Ecology (Volume II)**. Maritime shipping activity, inclusive of commercial fishing vessel activity where relevant, is described in **Chapter 12: Shipping and Navigation (Volume II)**.

## 2 Study Area

4. The Bellrock WFDA is located within the northern portion of the International Council for the Exploration of the Seas (ICES) Division 4b (central North Sea) statistical area; within United Kingdom (UK) exclusive economic zone (EEZ) waters. For the purpose of recording commercial fisheries landings, ICES Division 4b is divided into statistical rectangles of which the Bellrock WFDA overlaps with 42E9 and 42F0. For the purposes of the EIA, the commercial fisheries local study area comprises these two ICES rectangles.
5. In order to understand fishing activity in waters adjacent to the Bellrock WFDA, a commercial fisheries regional study area has been defined to include the commercial fisheries local study area together with the surrounding 10 ICES rectangles. 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.
6. To summarise, there are two scales of commercial fisheries study areas – both shown in **Figure 11.1.1: Bellrock Wind Farm Development Area (WFDA) Commercial Fisheries Study Area**
7. Figure 11.1.43, as follows (and collectively referred to as the commercial fisheries study areas):
  - Commercial fisheries local study area: 42E9 and 42F0; and
  - Commercial fisheries regional fisheries study area: 41E8 – 41F1, 42E8 – 42F1 and 43E8 – 43F1.
8. To provide context to the description of commercial fishing activity presented in this report, **Figure 11.1.44** identifies spatial fishery restrictions relevant to the commercial fisheries study areas, inclusive of Marine Protected Areas with proposed fisheries management measures.

## 3 Methodology

### 3.1 Approach

9. 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 ArcMap geographic information system software.
10. In addition to quantitative data, qualitative insights have been gathered through direct consultation with the fishing industry.
11. This analysis has been carried out through a desktop study. It is considered that a specific commercial fisheries survey was not necessary and therefore was not undertaken.

### 3.2 Desktop Study

12. A detailed desktop review of existing studies and datasets was undertaken to gather information on commercial fisheries within the commercial fisheries study areas.
13. **Table 3.1** summarises the studies and datasets used.
14. 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).
15. 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.
16. Where data sources allow, a five 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 2010 to 2023, as annotated in **Table 3.1**.
17. 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: Commercial Fisheries Baseline Data Sources**

Data	Source	Year(s)	Reference
<b>Landings Statistics</b>			
Landings statistics data for UK-registered vessels, with data query attributes for: landing year; landing month; vessel length group; ICES rectangle; vessel/gear type; port of landing; species; live weight (tonnes); and value (£).	MMO	2010 to 2023	MMO, various dates
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, 2024
<b>Spatial Data</b>			
VMS data for UK registered vessels $\geq 15$ m in length. Note that UK vessels $\geq 12$ m in length have VMS on board, however, to date, the MMO provide amalgamated VMS datasets for $\geq 15$ m vessels only. VMS data sourced from MMO displays the first sales value (£) of catches.	MMO	2016 to 2020	MMO, 2022
VMS data for EU registered vessels $\geq 12$ m in 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
Positional data for Scottish registered vessels $\geq 12$ m in length.	NMPi	2017 to 2021	Marine Directorate, 2022
Fishing intensity based on VMS and landings data for UK vessels $\geq 15$ m in length for squid, demersal species, Nephrops and scallops.	NMPi	2009 to 2013	Kafas et al., 2013
Fishing vessel route density, based on vessel AIS positional data. AIS is required to be fitted on fishing vessels $\geq 15$ m in length.	EMSA	2023	EMSA, 2024
Norwegian vessels over 15 m in length VMS data by gear type.	Barents Watch	2011 to 2023	Barents Watch, 2024
Surveillance data indicating vessel nationality and gear type for actively fishing vessels.	NMPi	2018 to 2023	Marine Directorate, 2024
Scottish Pelagic Fishermen's Association (SPFA) VMS data for Scottish pelagic trawl member vessels.	SPFA	2013 to 2021	SPFA, 2024

Data	Source	Year(s)	Reference
Scottish Fishermen’s Federation (SFF) vessel plotter data indicating location of fishing.	SFF	Long term data series <sup>1</sup>	SFF, 2025 [Confidential]
Bellrock WFDA marine traffic (AIS and radar) survey data and long-term vessel traffic analysis.	Bellrock Offshore Wind Farm Limited	12-month AIS data analysis covering January to December 2023  14-day summer marine traffic survey during August 2024	Anatec, 2024a and 2024b

### 3.3 Data Limitations and Uncertainties

18. 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 the expert judgement of the assessment team.
19. Limitations of landings data include the spatial size of ICES rectangles which could potentially misrepresent actual activity across the Bellrock WFDA; care is therefore required when interpreting these data.
20. It is also important to recognise the influence of external events on baseline landings data. In particular, the year 2020 saw landings heavily impacted by the Covid-19 pandemic, which disrupted markets, supply chains, and fishing activity across the UK. To account for this, the baseline has been extended to provide a longer-term trend against which the effect of Covid-19 on landings can be considered. More generally, a decrease in landings has been observed across the UK compared to pre-pandemic years, which is considered to be associated with Covid-related restrictions and economic impacts (MMO, 2021; Marine Scotland, 2021). This wider context should be considered when interpreting the landings baseline for the Bellrock WFDA.
21. 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, 2023a). The RBS legislation is applicable to licenced fishing vessels of all lengths and requires name and port letters and numbers of the vessel which landed the fish to be recorded in

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<sup>1</sup> Long term data series is collated across several years (e.g. up to ten) for an undefined period and from a sample of vessels that are members of each specified association.

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, 2023a). 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, 2023a). There are occasions when fish are not subject to the RBS legislation and therefore are not represented within the MMO landings statistics database, for instance when purchases of first sale fish direct from a fishing vessel are wholly for private consumption, and less than 25 kg is bought per day.

22. Lack of recent landings statistics for EU (non-UK) fleets is also recognised as a data limitation; based on the most recent European Commission data call, more recent landings data (2017 to 2022) is no longer available by ICES rectangle. Data at a scale of ICES division (i.e. the whole of the central North Sea) is less useful to understand fishing activity specific to the Bellrock WFDA.
23. All UK and EU fishing vessels (i.e. fishing vessels flying the flag of the UK or an EU Member State), and third-party fishing vessels operating in UK and EU waters that are  $\geq 12$  m in length are required to have a VMS on board. This reports the vessels' position to fisheries management authorities, which in the case of EU fishing vessels, is every two hours. Since 1 January 2012, this obligation has applied to vessels that are  $\geq 12$  m in length. Limitations of publicly available 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 areas (i.e. which typically comprises of vessels  $<15$  m in length). To assist in mitigating the small risk of under-representing smaller inshore vessels, which are not expected to be active as far offshore as the Bellrock WFDA, fisheries surveillance data has been analysed alongside publicly sourced VMS and AIS data.
24. Marine Scotland Compliance fisheries patrol vessels and surveillance aircraft are responsible for monitoring fishing activity within Scottish waters. These operations are undertaken to construct an on-going picture of fishing activity within the Scottish EEZ and to make effective use of patrol vessel activity by coordinated use of surveillance data. As with other forms of monitoring, these data cannot be considered to give an accurate picture of the actual level of activity and have several limitations, including:
  - Patrol effort by 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; and
  - Vessels fishing at night would likely remain undetected.

**Table 3.2: Data Limitations and Uncertainty**

<b>Data</b>	<b>Type of Data</b>	<b>Limitations and Uncertainty<sup>1</sup></b>
Landings statistics, MMO (2024)	Landings statistics (2018-2022) data for UK-registered vessels.	The data are recorded from sales notes and landing declarations for all vessel lengths. Due to the UK legislation of Registration of Buyers and Sellers data is considered accurate and verifiable.  Data assessed with low uncertainty and high confidence.
Landings statistics, EU DCF (2023)	Landings statistics (2012-2016) data for all EU landings 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 mis-represented by the data. Accuracy is likely to be greater for landings from larger vessels.  For UK vessels under 10 m in length data is assessed with high uncertainty and low confidence.  For all other EU vessels data is assessed with low uncertainty and high confidence.
VMS data, MMO (2022)	UK VMS data (2016-2020) for vessels $\geq 15$ m in 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.
VMS data, ICES (2022)	EU SAR data (2016-2020) for vessels $\geq 12$ m in 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.
AIS data, EMSA (2024)	AIS data (2023) for fishing vessels $\geq 15$ m in 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.
Positional data, NMPi (2022)	Scottish positional data (2016-2020) for vessels under 12 m in length.	Data is derived from positions self-declared by fishers. These positions have not been verified by other sources. Data assessed with medium uncertainty and medium confidence.
VMS data, Kafas et al. (2013)	Amalgamated VMS intensity layer by gear type.	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.
VMS data, Barents Watch (2024)	Norwegian VMS data (2011-2023) for vessels $\geq 15$ m in length.	The data is only available for 15 m and over vessels, so is not representative of $<15$ m vessels, though it is considered unlikely that $<15$ m Norwegian vessels will be active in the local study area. Data assessed with medium uncertainty and medium confidence.
Fisheries surveillance data, Marine Directorate (2024)	Surveillance data (2017-2022) for all fishing vessels.	The data is for all vessel lengths and UK and non-UK vessels. Data presents a snap-shot of activity at time of surveillance and is not routinely collected. Data assessed with medium uncertainty and medium confidence.
Marine traffic survey data, Anatec (2024a and b)	Marine traffic (AIS and radar) survey data.	An assessment of fishing vessel activity to inform the Navigational Risk Assessment undertaken for the Bellrock WFDA based on a 14-day AIS and radar survey in Summer 2024 and analysis of a 12-month AIS dataset spanning 2023. Data assessed with low uncertainty and high confidence.
Fishing industry	Fishing vessel plotter data	The data is for a selection of representative vessels that are members of specific organisations and therefore does not

Data	Type of Data	Limitations and Uncertainty <sup>1</sup>
		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.
<p>Notes:</p> <p><sup>1</sup> The uncertainty and confidence levels are defined based on judgement and are intended to inform the appropriateness of data used to inform the EIA.</p>		

## 4 Key Species

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

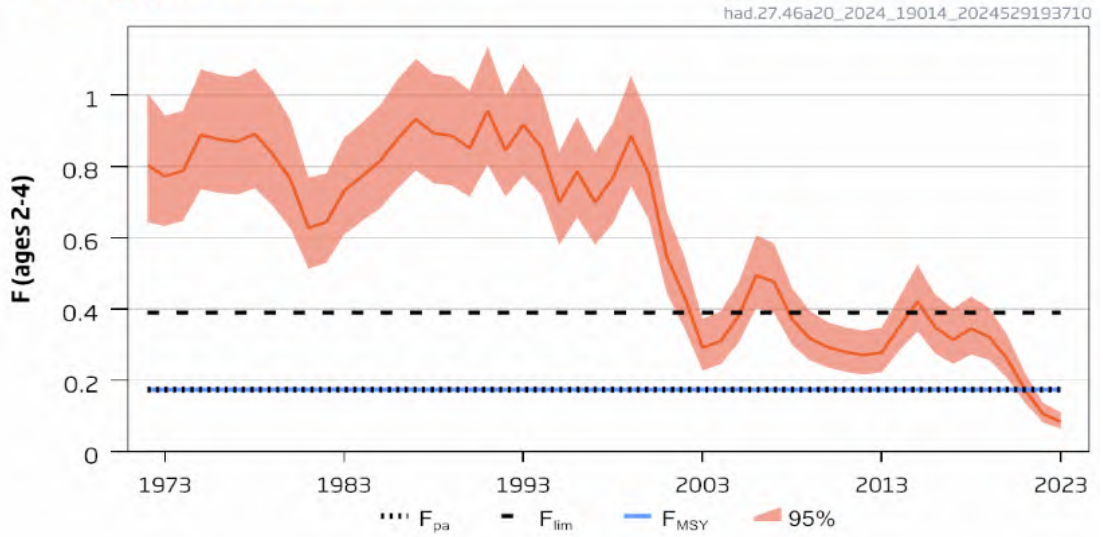
### 4.1 Demersal Finfish

#### 4.1.1 Haddock

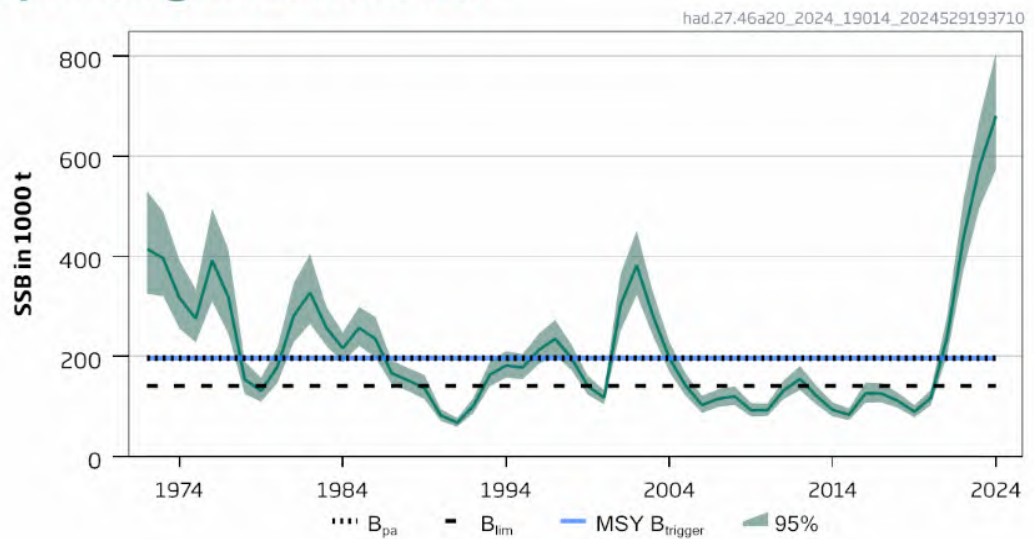
26. Haddock *Melanogrammus aeglefinus* are a demersal bottom feeding round fish that occur mainly in waters from 40 m to 200 m deep. Haddock mature at around two to three years of age and feed mainly on small bottom-living organisms including crustaceans, molluscs, echinoderms, worms and fishes.
27. In the North Sea, 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 4.1** (ICES, 2025a)). ICES (2025a) advice indicates that the recruitment in four 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 4.1**. 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. Despite the overall healthy status, the assessment highlights a projected decline in spawning stock biomass in the coming years, primarily due to a return to average recruitment levels following strong year classes in 2019 and 2020. If recruitment remains average or below, the stock is expected to decline by approximately 23% by 2027 under fishing at maximum sustainable yield (FMSY). This trend suggests that while the stock is currently robust, precautionary management should be maintained to ensure sustainability if recruitment fails to improve.

Plate 4.1: Haddock North Sea, West of Scotland, Skagerrak Stock Assessment Indicating Fishing Pressure and Stock Size

### Fishing pressure



### Spawning Stock Biomass

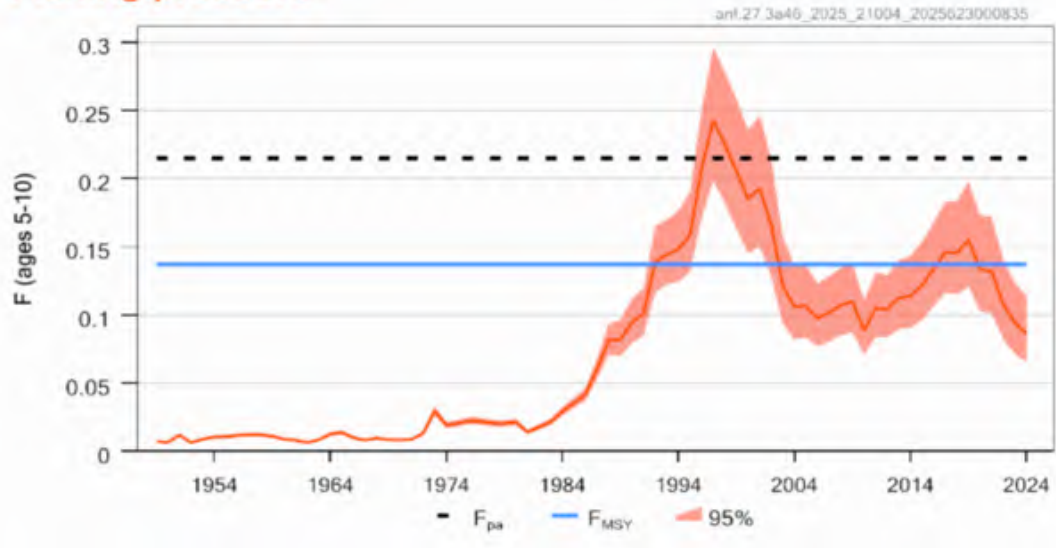


## 4.1.2 Monkfish

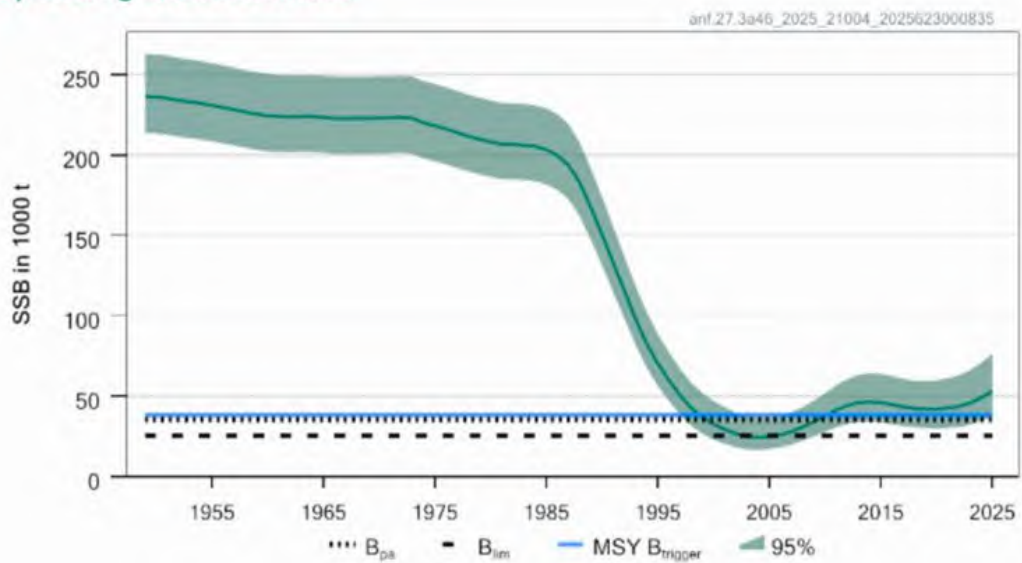
28. There are two closely related species of monkfish; white monkfish *Lophius piscatorius* and black monkfish *L. budegassa*. White monkfish occur throughout the Northeast Atlantic and are more abundant than black monkfish in northern areas. It is a very distinctive fish, recognisable by having its 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 four to five years at a length of 35 cm.
29. Both species are most abundant from 200 m to 500 m water depth, 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.
30. A minimum marketing weight is in place (EC 2406/96) of 500 grams (g) gutted or 200 g tail per individual. A single total allowable catch (TAC) applies to both species of monkfish as they are often not separated in the landings.
31. Monkfish are a highly valuable demersal fish species, caught almost exclusively by demersal otter trawls.
32. Monkfish in the northern shelf are managed as a combined stock (white and black-bellied species). ICES advises that 2026 catches should not exceed 30,358 tonnes, a reduction from 2025 advice due to downward revisions in stock perception. The stock shows fluctuating recruitment but remains above Blim (**Plate 4.2** (ICES, 2025b)), with fishing mortality close to FMSY. Landings are dominated by mixed trawl fisheries, particularly targeting demersal species. Spatial distribution includes shelf edge and deeper offshore waters, with seasonal movements linked to feeding and spawning. Despite uncertainties in survey coverage and species-specific data, the assessment indicates the stock is being exploited sustainably, though reliance on combined-species management remains a precautionary weakness.

Plate 4.2: Monkfish Greater North Sea and West of Scotland Stock Assessment Indicating Fishing Pressure and Stock Size

### Fishing pressure



### Spawning Stock Biomass

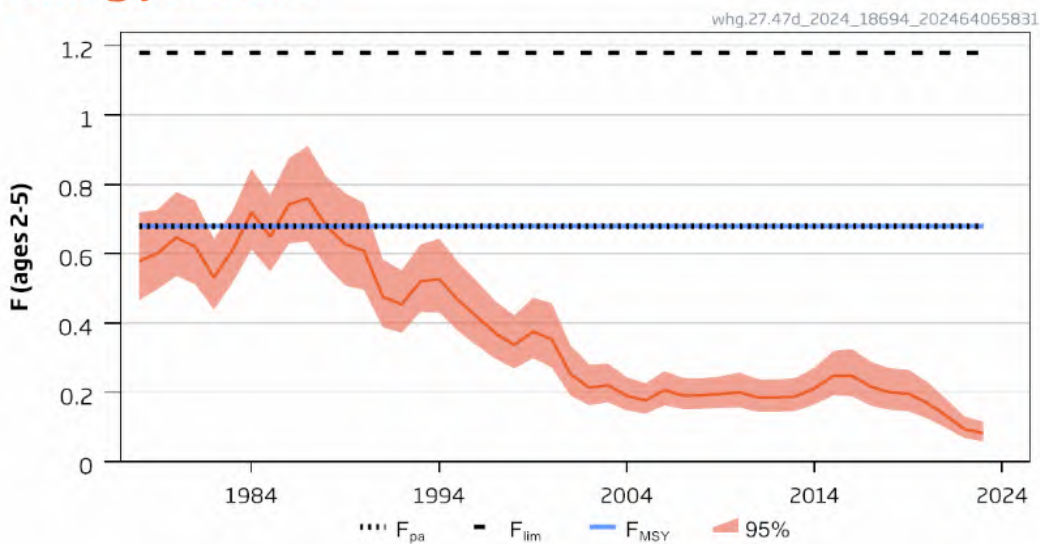


### 4.1.3 Whiting

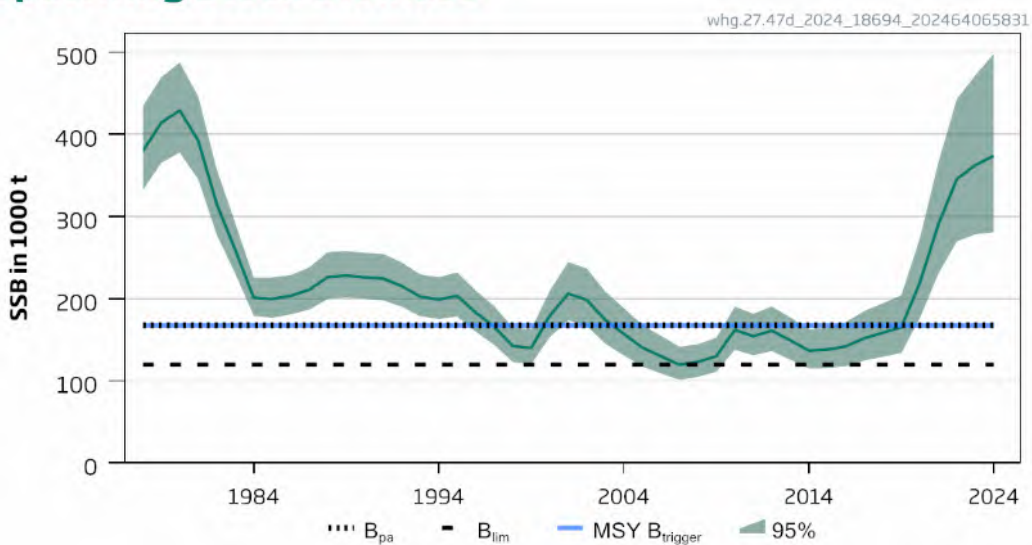
33. Whiting *Merlangius merlangus* are commonly found on mud and gravel bottoms, but also on sand and rock. Whiting migrate to the open sea after the first year of life (Cohen et al., 1990). ICES consider the North Sea stock to be harvested sustainably with fishing mortality well below precautionary and limit reference levels. The spawning stock biomass is at full reproductive capacity and has increased sharply across the past 4 to 5 years (**Plate 4.3**).
34. Whiting are targeted by demersal otter trawlers as part of targeted and mixed demersal fisheries.
35. The North Sea and eastern English Channel whiting stock is currently in good condition, with fishing pressure below FMSY and spawning stock biomass above maximum sustainable yield (MSY) Btrigger, Bpa, and Blim (**Plate 4.3**). ICES advises that catches in 2026 should not exceed 198,609 tonnes, reflecting a 5.6% increase relative to 2025 advice. This change is linked to a rising stock trend despite continued discarding (2024 discards were 20,980 tonnes, about 60% of the human consumption catch). The revised reference points (Blim = 119,585 t, Bpa = 167,419 t, FMSY = 0.68) remain precautionary following updated natural mortality estimates. Recruitment is assumed at a long-term mean of 10.7 billion age-0 fish. Management is complicated by high discard levels and the need for mixed-fisheries considerations, but the stock overall is stable and resilient under MSY exploitation.

Plate 4.3: Whiting North Sea and Eastern English Channel Stock Assessment Indicating Fishing Pressure and Stock Size

### Fishing pressure



### Spawning Stock Biomass



#### 4.1.4 Other Species

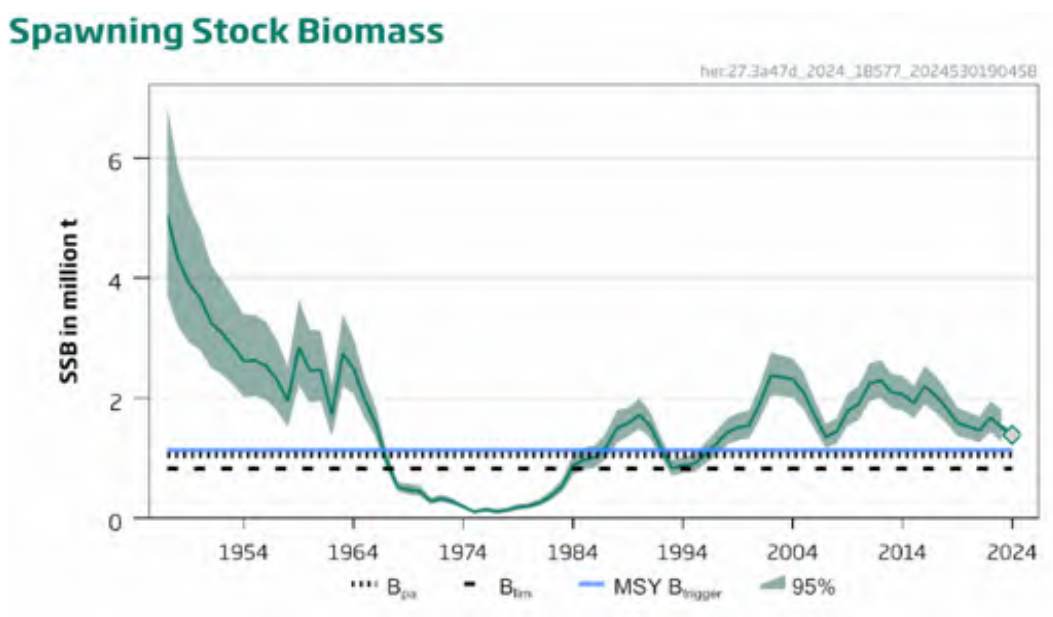
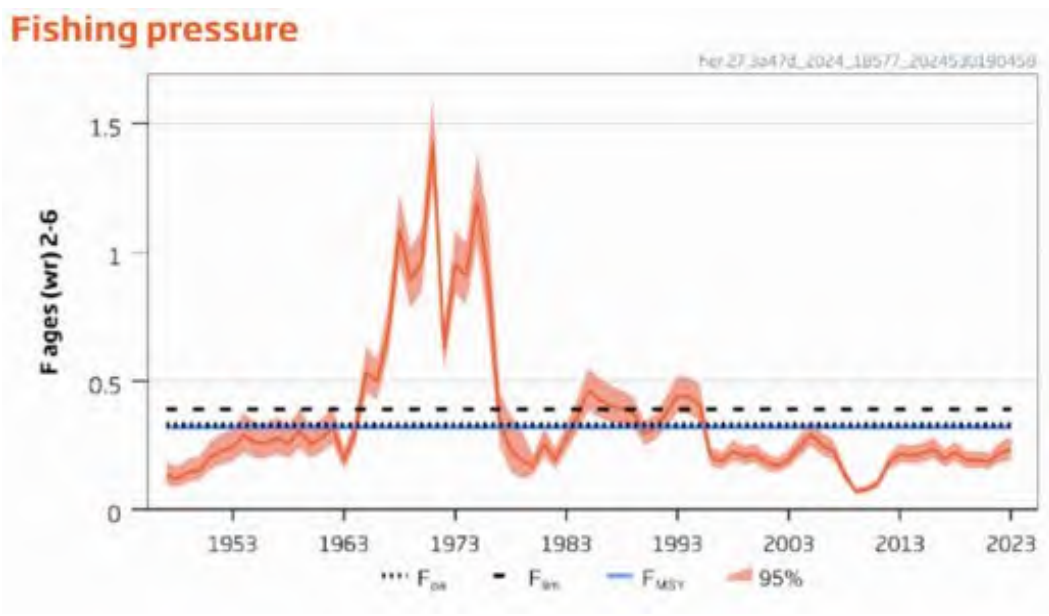
36. Other demersal finfish species landed from the commercial fisheries study areas, though in lesser volumes than those described above, include lemon sole *Microstomus kitt*, halibut *Hippoglossus hippoglossus*, cod *Gadus morhua* and plaice *Pleuronectes platessa*.

## 4.2 Pelagic Finfish

### 4.2.1 Herring

37. The North Sea herring *Clupea harengus* stock, which collapsed in the 1970s and was closed to fishing for several years, subsequently recovered, and although it fell back in the mid-1990s, it has again been rehabilitated. Since 1998 spawning stock biomass has been above MSY and fishing pressure has remained below the MSY benchmark (ICES, 2022), though there are concerns that future low recruitment could alter this trend. Applicable to directed herring fisheries in the North Sea there is a minimum conservation reference size (MCRS) of 20 cm (3 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.
38. Herring shoals 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 specific benthic habitat types.
39. The latest ICES (2024c) advice indicates that the spawning stock biomass is above limit and target reference points, and the fishing pressure is below fishing mortality reference points; indicating a healthy stock (**Plate 4.4** (ICES, 2024c)).

Plate 4.4: Herring Autumn Spawners (North Sea, Skagerrak and Kattegat, Eastern English Channel Stock Assessment Indicating Fishing Pressure and Stock Size)



## 4.2.2 Mackerel

40. Mackerel *Scomber scombrus* are a pelagic species that live near the surface of the sea in large shoals. North Sea mackerel overwinter in the deep water, to the east and north of Shetland and on the edge of the Norwegian Deep. In the springtime, they migrate south to spawn in the central part of the North Sea from May until July.
41. In terms of fisheries management measures, a TAC is in place that covers all Northeast Atlantic fisheries. A MCRS of 30 cm is in place.

## 4.3 Shellfish

### 4.3.1 Nephrops

42. *Nephrops norvegicus* (also known as Norway lobster, Dublin Bay prawn, langoustine, nephrops and Nephrops) 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 cm to 20 cm. Nephrops do not reach sexual maturity until two to three years. Life span in the North Sea is understood to be eight to nine years.
43. 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.
44. 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 overlaps Nephrops FU34 (Devil's Hole). Management is applied via a TAC set for the whole of the North Sea (ICES Division 4).
45. There is a MCRS of 85 mm total length (25 mm carapace length and 46 mm tail) for Nephrops in the North Sea. 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. For the Nephrops trawl fishery in the North Sea, there is a de minimis exemption from the landing obligation consisting of a 6% discard rate by weight.
46. Under the Fisheries Act 2020, the Marine Directorate are currently developing a Nephrops Fisheries Management Plan for the North Sea, expected to be published in spring 2026. Stock assessments are typically undertaken annually by ICES within FUs using underwater television surveys but a full time-series of survey data is not available for the Devil's Hole Nephrops FU where stock status is not clearly understood in the absence of defined stock reference points (ICES, 2024d). ICES advise that catches of Nephrops from this FU in each of the years 2025 and 2026 should be no more than 599 tonnes (ICES, 2024d).

## 4.3.2 King Scallop

47. King scallop *Pecten 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 ten to 15 years and reach reproductive maturity between three to five 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.
48. Whilst annual assessments of king scallop stock status in English waters are undertaken by the Centre for Environment, Fisheries and Aquaculture Science (Cefas), the latest analytical assessment of stock status in Scottish waters was undertaken in 2016.
49. 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).

## 4.4 Cephalopods

### 4.4.1 Squid

50. 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'.
51. The squid fishery occurs in coastal waters, peaking in September and October, corresponding to the occurrence of pre-breeding squid (Young et al., 2006). In the UK squid is normally taken as a bycatch from the mixed demersal otter trawl fishery. However, to the north of the commercial fisheries study areas in the Moray Firth there is a squid directed fishery.
52. It is postulated that squid move from the West Coast of Scotland to the North Sea to spawn and that there may be squid spawning grounds located in the Moray Firth (Young et al., 2006).
53. 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.
54. The UK fishery for squid in the North Sea is not subject to management regulations for a TAC or quota or any other limits.

## 5 Key Fishing Gears

55. There are three 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); and
  - Métier – a homogenous subdivision, either of a fishery by vessel type or a fleet by voyage type.
56. 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. Key gears expected to be actively deployed within the Bellrock WFDA are demersal otter trawls and to a lesser extent demersal seines. Other gear types, less likely to be active with any regularity in the Bellrock WFDA but present in the wider study areas, include scallop dredges, pelagic trawls and pots.

### 5.1 Demersal Otter Trawl

57. **Table 5.1** describes the profile of demersal otter trawling vessels active across the commercial fisheries regional study area and **Plate 5.1** (Seafish, 2022; NiMa, 2024) shows a typical UK demersal trawler and associated gear in a pair trawl formation. 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.
58. Vessel numbers vary, and their presence is dependent upon the success of demersal and/or Nephrops catches elsewhere.
59. Demersal trawlers operating across the commercial fisheries regional study area tend to tow in directions which are in line with natural seabed contours.
60. Seasonality for the demersal otter trawl vessels operating across the commercial fisheries local study area indicates highest landings across late summer **Plate 5.2** (MMO, 2024)

**Table 5.1: Profile of Typical Demersal Otter Trawling Vessels**

Parameter	Indicative Details
Main target species	Haddock, Nephrops, monkfish
Nationality	Primarily Scottish, some English and some Northern Irish
Vessel length (m)	16 to 35
Horsepower (hp)	300 to 850
Typical towing speed (knots)	2 to 6

Parameter	Indicative Details
Typical gear	<p>Possible twin or multi-rig bottom trawl. Two trawl doors ('otter boards') approximately 1 tonne each, hold the net open.</p> <p>Various forms of ground gear depending on target species.</p>

Plate 5.1: Profile of Typical Demersal Otter Trawler Vessel and Pair Trawl Gear Diagram

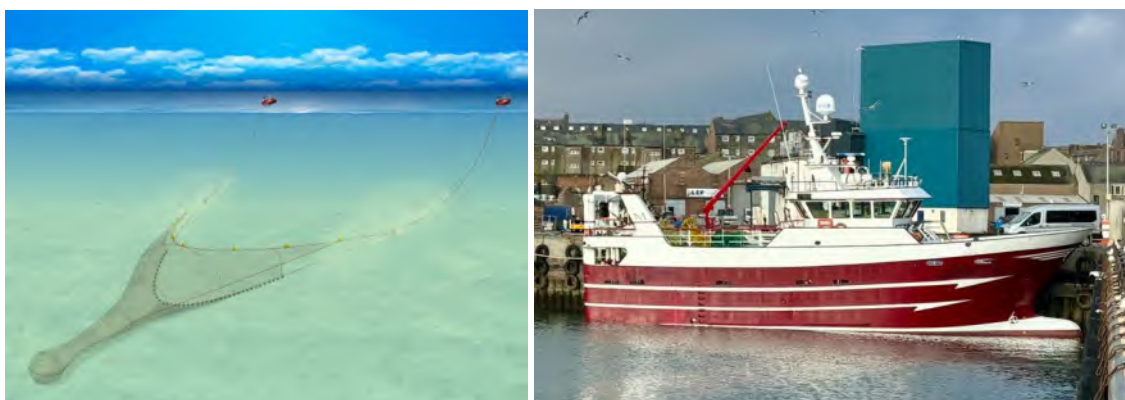
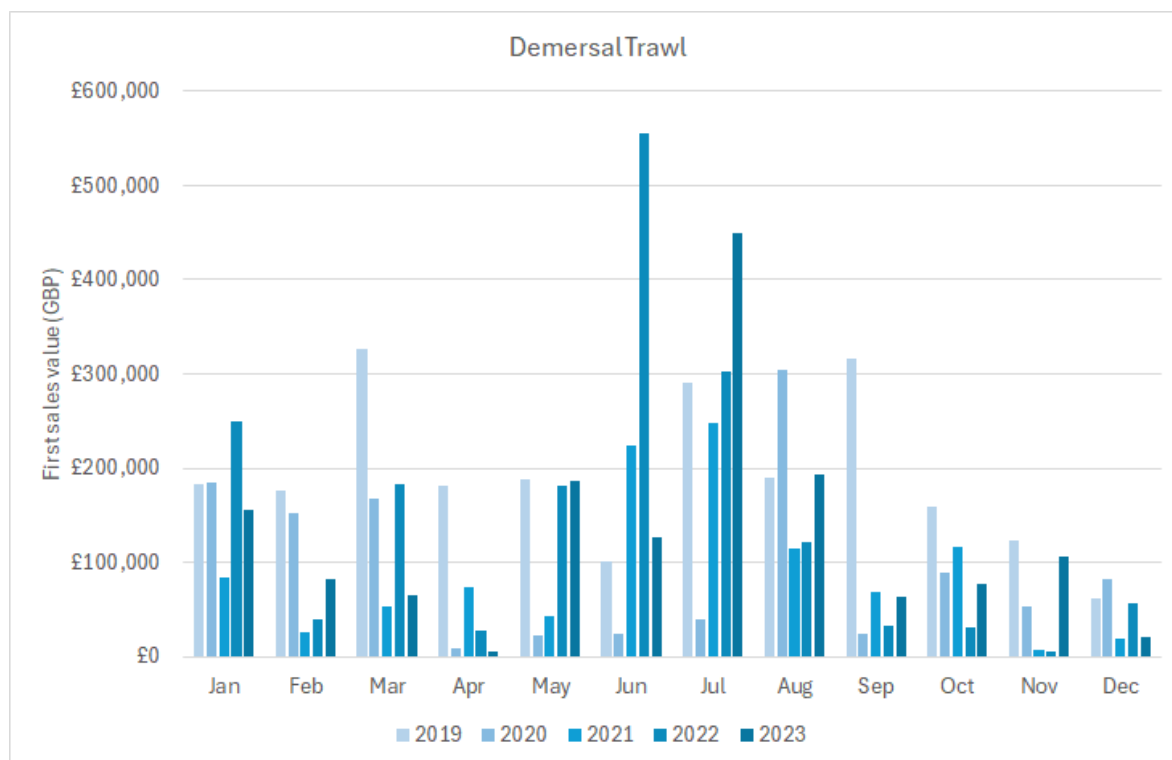


Plate 5.2: Seasonality of Landings by Demersal Otter Trawl from the Commercial Fisheries Local Study Area



## 5.2 Demersal Seine

61. **Table 5.2** describes the profile of Scottish seine vessels active across the commercial fisheries regional study area and **Plate 5.3** (Seafish, 2022; Fishing News, 2020) shows a typical Scottish seine gear and vessel. Scottish seine netting is a fishing method involving use of long weighted ropes to herd fish into the mouth of a trawl net to target demersal species - in this case primarily haddock - which live or feed on or near the seabed. The fishing gear is shot on the seabed in a rounded triangle shape with very long weighted ropes attached to each end of the net. The net is gradually hauled in with the vessel maintaining station using its engine power. As the net moves over the seabed it creates a light sand cloud that herds fish into the net.
62. The gear is only suitable for fishing on smooth sandy or muddy usually quite mobile sea beds. It cannot be operated on hard rocky sea beds as the gear would get damaged.
63. Seasonality for the Scottish seine vessels operating across the commercial fisheries local study area indicates highest landings in June and November and December (**Plate 5.4** (MMO, 2024)).

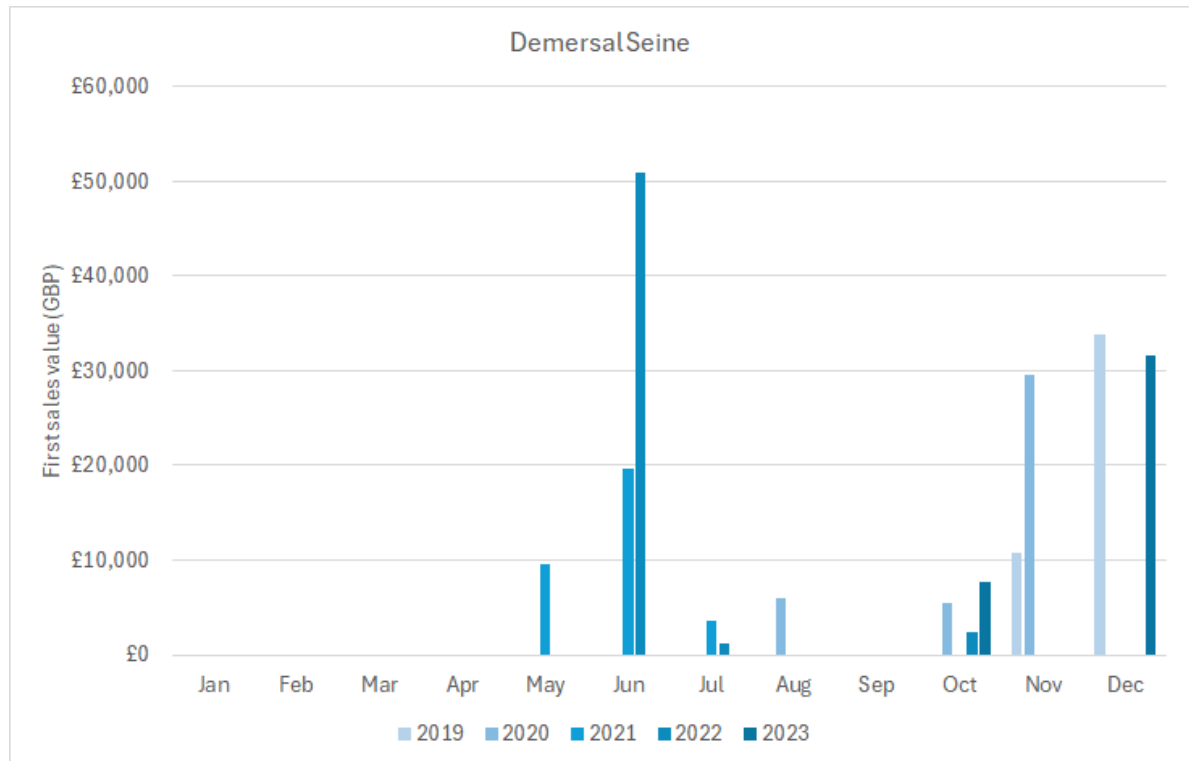
**Table 5.2: Profile of Typical Scottish Seine Vessels**

Parameter	Indicative Details
Main target species	Haddock
Nationality	Scottish
Vessel length (m)	18 to 40
Horsepower (hp)	150 to 1,500
Typical towing speed	N/A (vessel maintains station while gradually hauling net)
Typical gear	An encircling net shot is shot using very long – over 200 m - ropes to lay out the net. The net is towed closed and hauled from a boat under its own power.

**Plate 5.3: Profile of Typical Scottish Seine Gear and Vessel**



**Plate 5.4: Seasonality of Landings by Scottish Seine Vessels from the Commercial Fisheries Local Study Area**



## 5.3 Other Fishing Gears

### 5.3.1 Dredge

64. **Table 5.3** describes the profile of scallop dredging vessels active across the commercial fisheries regional study area and a typical scallop dredging vessel is shown in **Plate 5.5** (Seafish, 2022; Fishing News, 2020).
65. 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 two beams, which are fished on each side of the vessel.
66. UK scallop dredgers operate around the entire coastline of the UK. Scallop dredging takes place year-round. The UK scallop fleet has two main components: a fleet of larger boats (> 20 m in length) which range in a nomadic fashion exploiting both inshore and offshore scallop stocks around the UK; and smaller inshore boats (< 15 m in length) that are restricted in range to inshore waters. 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 four or five, 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.

- 67. 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.
- 68. 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.
- 69. Seasonality for the dredge vessels operating across the commercial fisheries local study area indicates highest landings across early summer months (**Plate 5.6** (MMO, 2024)).

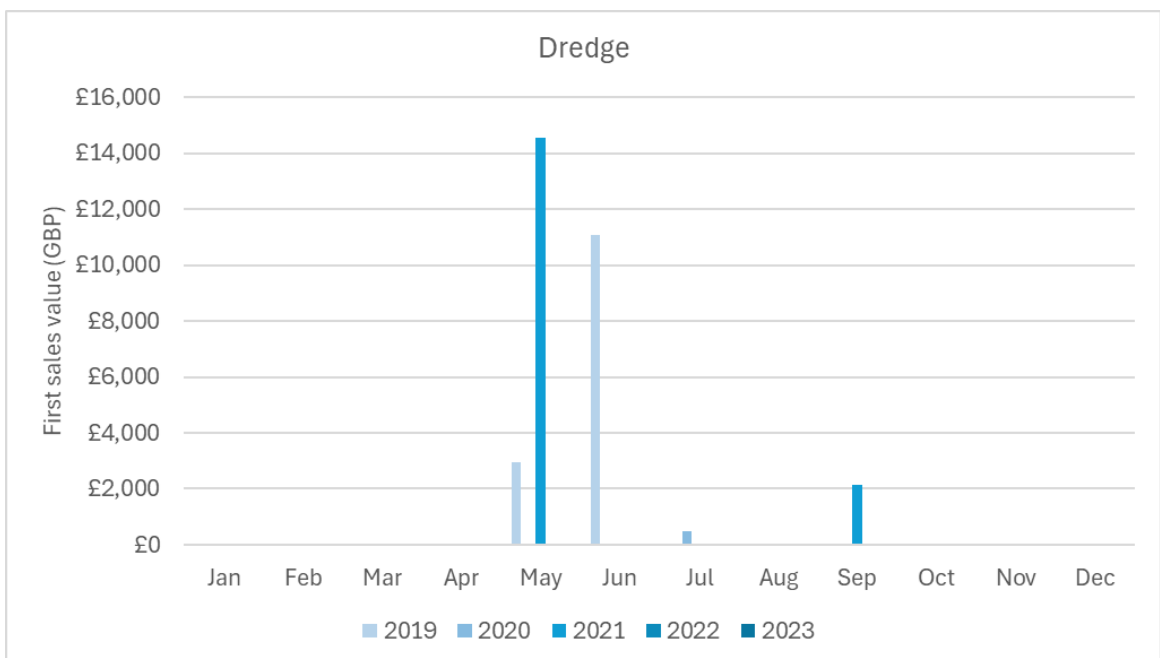
**Table 5.3: Profile of Typical Scallop Dredge Vessels**

Parameter	Indicative Details
Main target species	King scallop
Nationality	Primarily Scottish, and some English
Vessel length (m)	10 to 25
Horsepower (hp)	200 to 400
Typical towing speed (knots)	2 to 6
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 5.5: Profile of Typical Scallop Dredging Gear and Vessel**



**Plate 5.6: Seasonality of Landings by Scallop Dredge Vessels from the Commercial Fisheries Local Study Area**



### 5.3.2 Pelagic Trawl

70. **Table 5.4** describes the profile of pelagic trawl vessels active across the commercial fisheries local and regional study areas and **Plate 5.7** (Seafish, 2022; NiMa 2024) shows a typical pelagic trawl vessel.
71. Pelagic or mid-water trawls are towed at the appropriate level in the water column to intercept shoaling fish such as herring and mackerel. 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.

72. Landings by pelagic trawlers from the commercial fisheries local study area are very limited - landings by UK registered vessels are recorded in the commercial fisheries local study area only in October 2022 across the 2010 to 2023 time series.

**Table 5.4: Profile of Typical Pelagic Trawl Vessels**

Parameter	Indicative details
Main target species	Herring
Nationality	Danish, Dutch, English, French and German
Vessel length (m)	30 to 50
Horsepower (hp)	500 to 1,200
Typical towing speed (knots)	2.5 to 5
Typical gear	Pair or single trawls. Net depth changed by altering either warp (rope) length or towing speed.

**Plate 5.7: Profile of Typical Pelagic Trawl Gear and Vessel**



### 5.3.3 Pots

73. **Table 5.5** describes the profile of potting vessels active across the commercial fisheries local and regional study areas and **Plate 5.8** (Seafish, 2022; Fishing News, 2016) shows a typical potting vessel.
74. Creels or pots are used for the capture of brown crab *Cancer pagurus* and lobster *Homarus gammarus*. Pots 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 nm, anchored at each end with anchors or chain clump weights. A variety of surface markers are used, including flagged dhans, buoys and cans. Soak

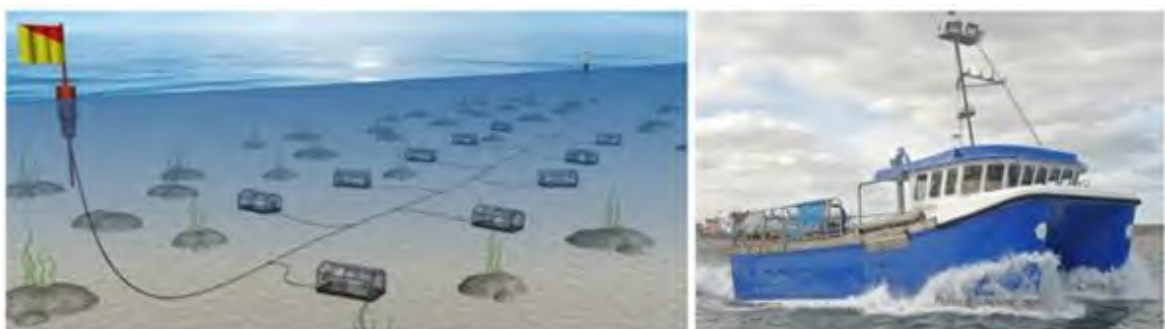
times, the time between emptying and re-baiting the pots, can vary between six and 168 hours, but would typically be 24 hours. All pots are worked on a rotational basis; after hauling and emptying, pots are baited and re-set. Creel design is typically D-shaped in section and made from steel rods covered in netting and protected or “bumpered” with rope or rubber strips. Pots are usually deployed on rocky substrate, though may less frequently be found on other softer substrates.

- 75. Larger potters working further offshore make fishing trips lasting around two days. Smaller potters under 10 m in length operate as day boats, returning to port after hauling, emptying, baiting and re-setting fleets of pots. Potting vessels may target a single or multiple shellfish species.
- 76. Landings by potters from the commercial fisheries local study area are very limited, with landings recorded only in November 2021 across the 2010 to 2023 period.

**Table 5.5: Profile of Typical Potting Vessels**

Parameter	Indicative details
Main target species	Brown crab
Nationality	Scottish
Vessel length (m)	Over 10 and under 10
Horsepower (hp)	60 to 350
Typical towing speed (knots)	0 to 9
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 5.8: Profile of Typical Potting Gear and Vessel**



## 6 Overview of Landings Statistics

### 6.1 Commercial Fisheries Local Study Area

77. Commercial fisheries landings statistics, showing annual landings value, first sales value and landed weight per species by UK-registered vessels operating within the local commercial fisheries study area are shown in **Plate 6.1** to **Plate 6.2** (MMO, 2022a; MMO, 2024) respectively. An annual average value of £1.6 million was landed by all UK vessels across the years 2019 to 2023. The timeseries presented in the aforementioned figures covers the period 2010 to 2023 and provides insight into long term trends in catches from the local commercial fisheries study area. The highest value landings are taken from ICES rectangle 42F0 which overlaps the eastern portion of the Bellrock WFDA.
78. The statistics indicate that Nephrops and haddock are the most economically important species (with an annual average landed value of £944,980 and £477,618 respectively). Landings of these species have varied annually across the 2010 to 2023 time series with landings of Nephrops showing significant fluctuation but a gently increasing overall value trend, whilst the value of haddock landings has declined since a most recent peak in 2015.
79. Landings of herring, monkfish and whiting are also important to the local study area. Herring landings have varied substantially each year through the timeseries showing peaks in 2011 and 2018. Landings values of monkfish have shown a slight increase over the time series, and of whiting have shown slight decline since 2015.
80. By landed weight, the same key species are shown to be of importance in the local study area.
81. The majority of landings by UK fishing vessels are made by vessels registered in Scotland (84% by value), with a smaller proportion by English (14% by value) and Northern Irish (1.4% by value) vessels. Landings by English and Northern Irish vessels have declined over the time series (**Plate 6.3** (MMO, 2022a; MMO, 2024)). Key local landings ports include Peterhead and Fraserburgh.
82. Landed value by gear type for the commercial fisheries local study area is shown in **Plate 6.4** (MMO, 2022a; MMO, 2024). Landings are primarily associated with demersal trawls, with some landings also attributed to demersal seine gear and scallop dredges.

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Plate 6.1: Key Species by Annual Landed Value (GBP) (2010 to 2023) from the Commercial Fisheries Local Study Area Indicating Average Over the Timeseries in Orange

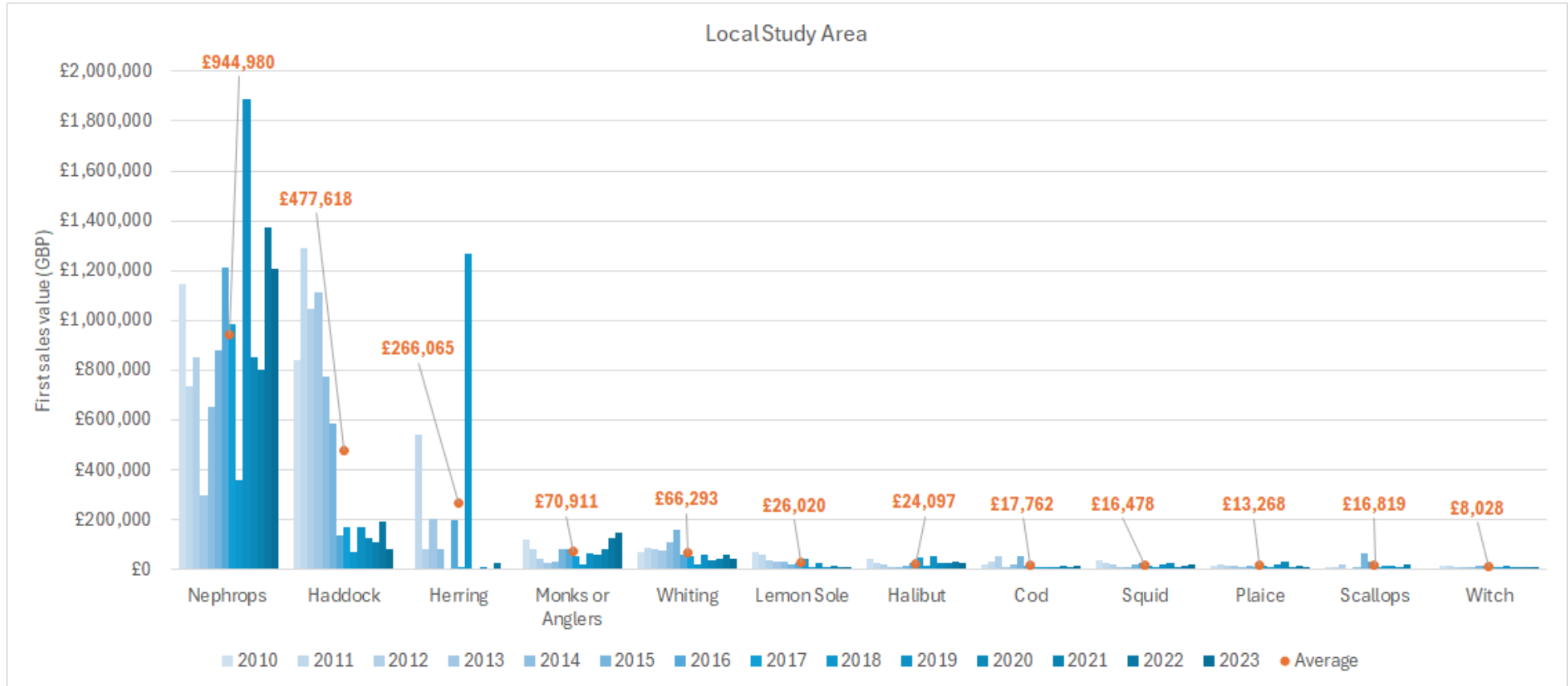


Plate 6.2: Key Species by Annual Landed Weight (GBP) (2010 to 2023) from the Commercial Fisheries Local Study Area

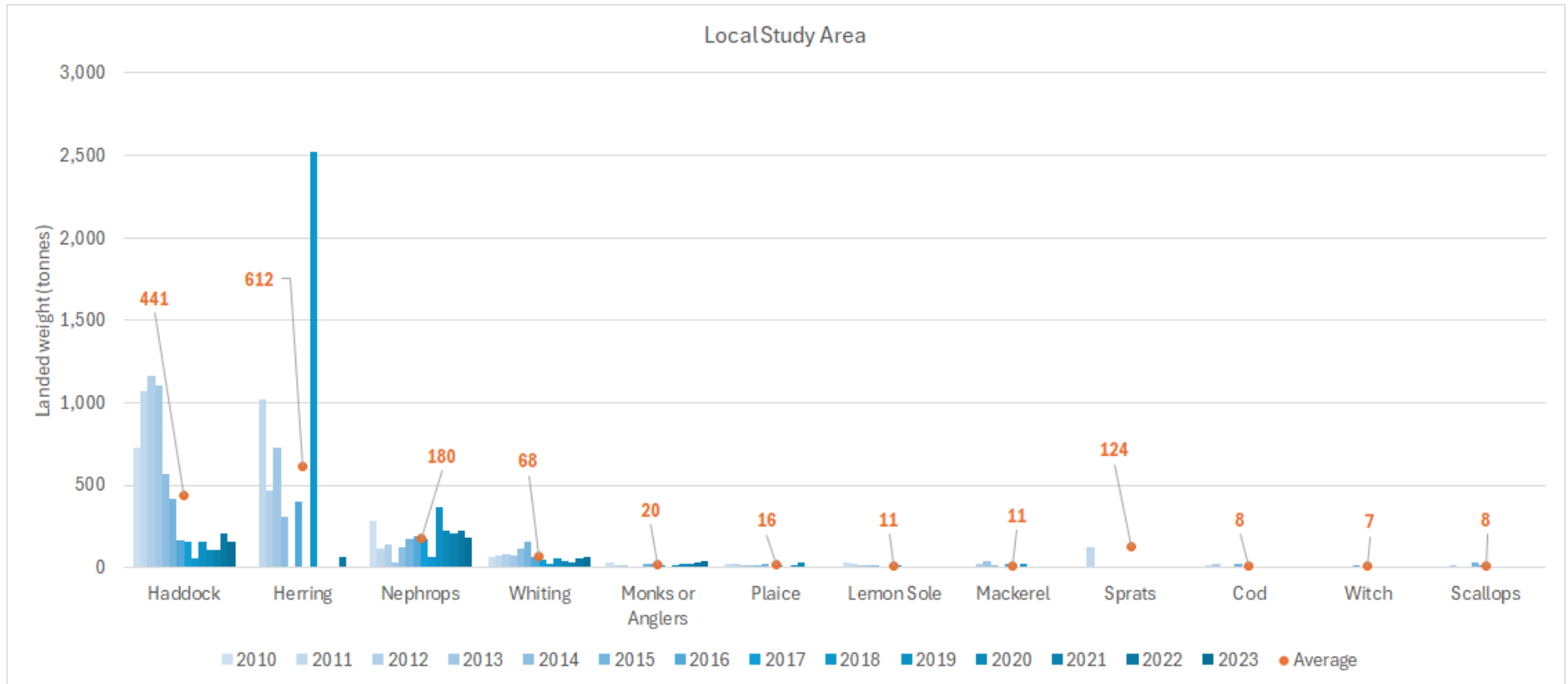


Plate 6.3: Annual Landed Value (GBP) (2010 to 2023) by Vessel Nationality from the Commercial Fisheries Local Study Area

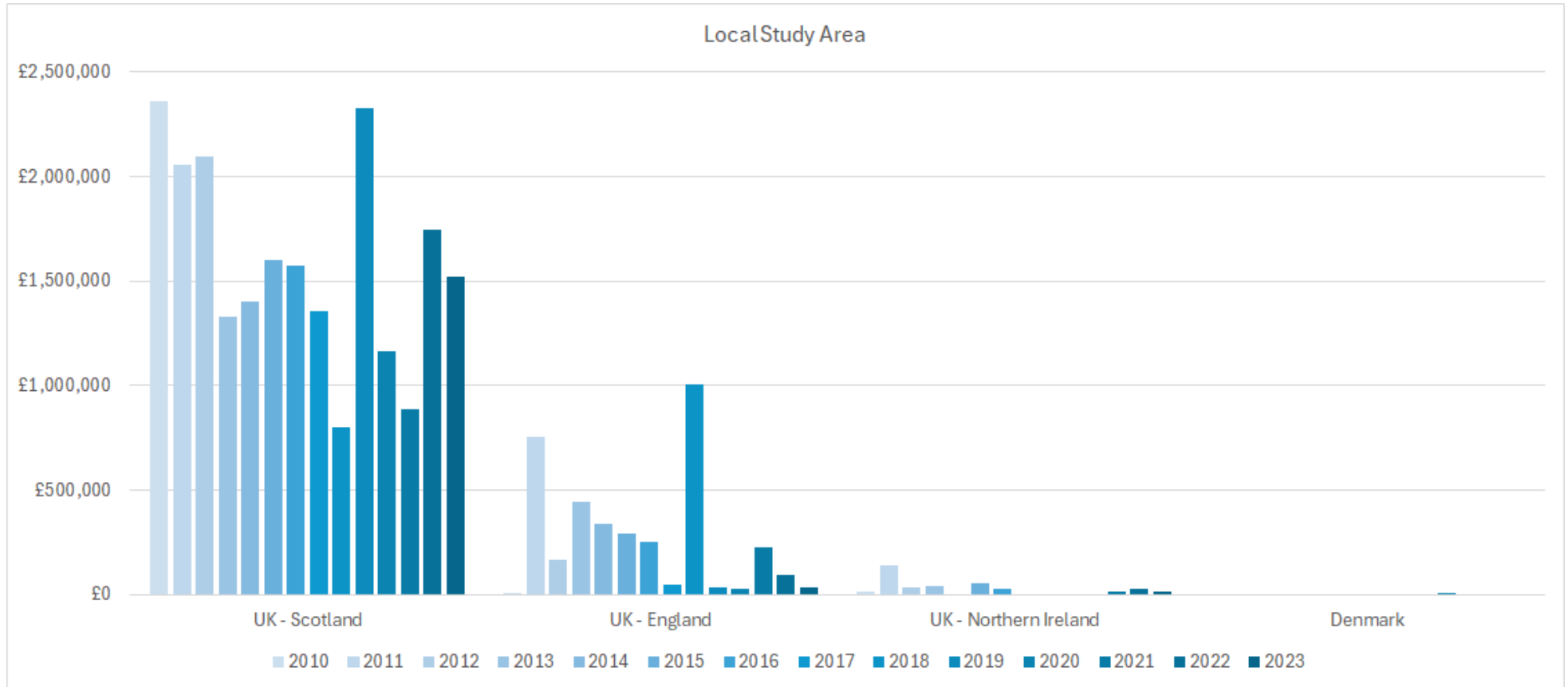
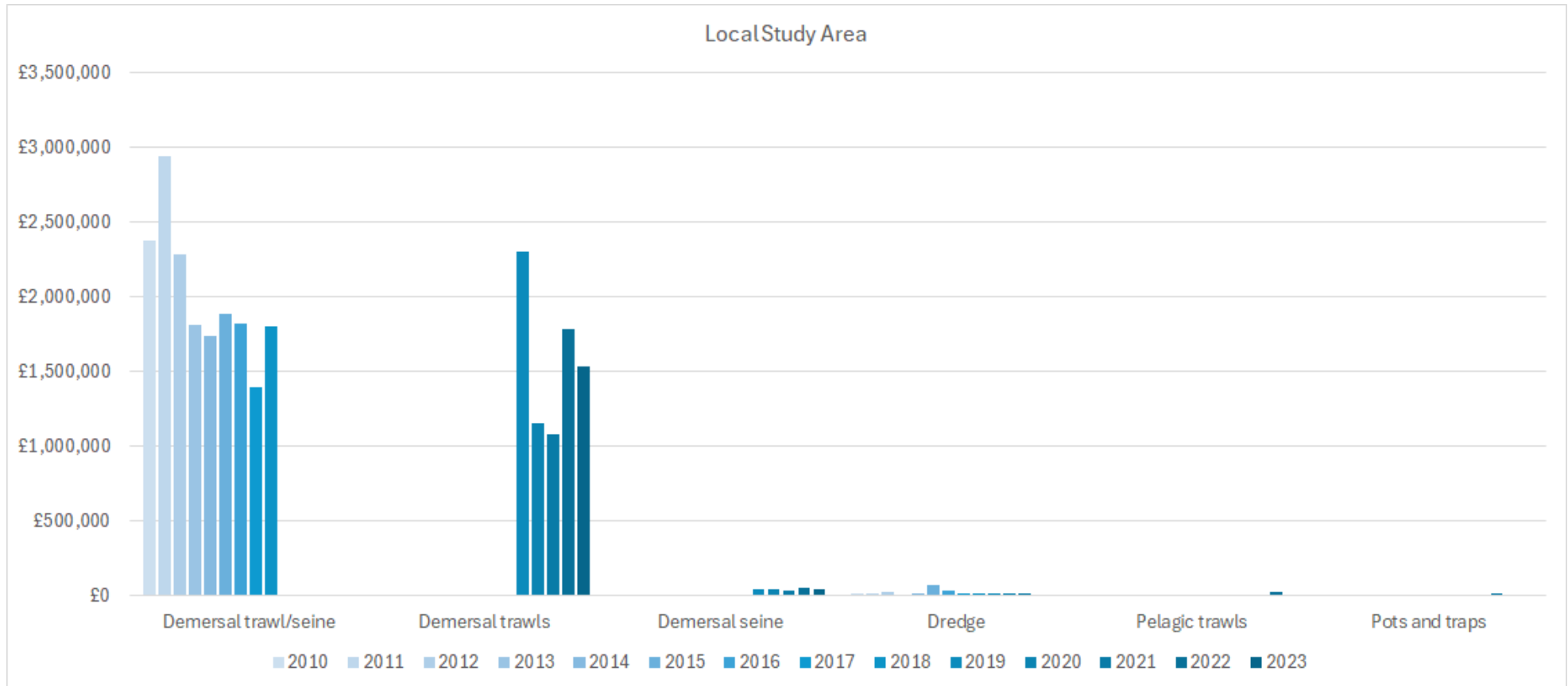


Plate 6.4: Average Annual Landed Value (GBP) (2010 to 2023) by Gear Type from the Commercial Fisheries Local Study Area



83. Long-term landings data has been analysed for the top five species from the commercial fisheries local study area indicating the landed weight and first sales value by ICES rectangle from 2010 to 2023 for Nephrops (**Plate 6.5** (MMO, 2022a; MMO, 2024)), haddock (**Plate 6.6** (MMO, 2022a; MMO, 2024)), and herring (**Plate 6.7**).
84. Nephrops are targeted predominately from ICES rectangle 42F0 overlapping the eastern portion of the Bellrock WFDA, with a long-term average £918,000 value from this rectangle compared to £27,000 from ICES rectangle 42E9. Nephrops are caught by demersal otter trawl (**Section 5.1**).
85. Haddock landings have fluctuated across the time series, declining notably from 2016 onwards. Landings are made from across the local study area, though are greatest from ICES rectangle 42E9 overlapping the western portion of the Bellrock WFDA. In 2023 landings from both ICES rectangles forming the local study area were valued at £80,000. Stakeholder consultation has suggested that haddock landings, specifically for small size classes of haddock, may be expected to increase in the near future (see **Chapter 11: Commercial Fisheries (Volume II)**).
86. Herring landings have fluctuated dramatically across the time series, which is not unusual given the highly mobile nature of the species and associated sporadic fishery. In some years across the time series no landings are recorded. Relative peaks in landings from the local study area are observed in 2011 and 2018. Low volumes (70 tonnes) of landings are recorded from the local study area across the most recent five-year period for which landings data are available, 2019 to 2023. These occasional peaks are expected given the highly mobile nature of herring, which are targeted when following their migratory routes. However, the overall low landings across the time series (with the exception of sporadic peaks) suggest that the species does not typically migrate through this area in significant numbers and is not specifically targeted within the local study area.

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Plate 6.5: Long Term Landing Trends (First Sales Value on Left and Landed Weight on Right) for Nephrops from the Commercial Fisheries Local Study Area

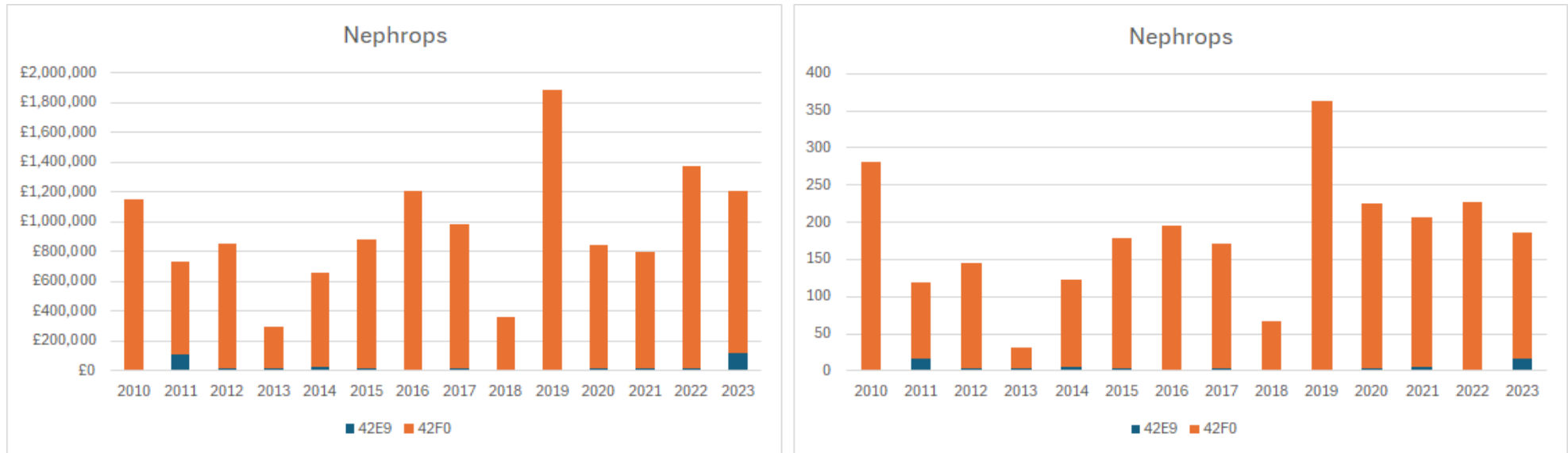


Plate 6.6: Long Term Landing Trends (First Sales Value on Left and Landed Weight on Right) for Haddock from the Commercial Fisheries Local Study Area

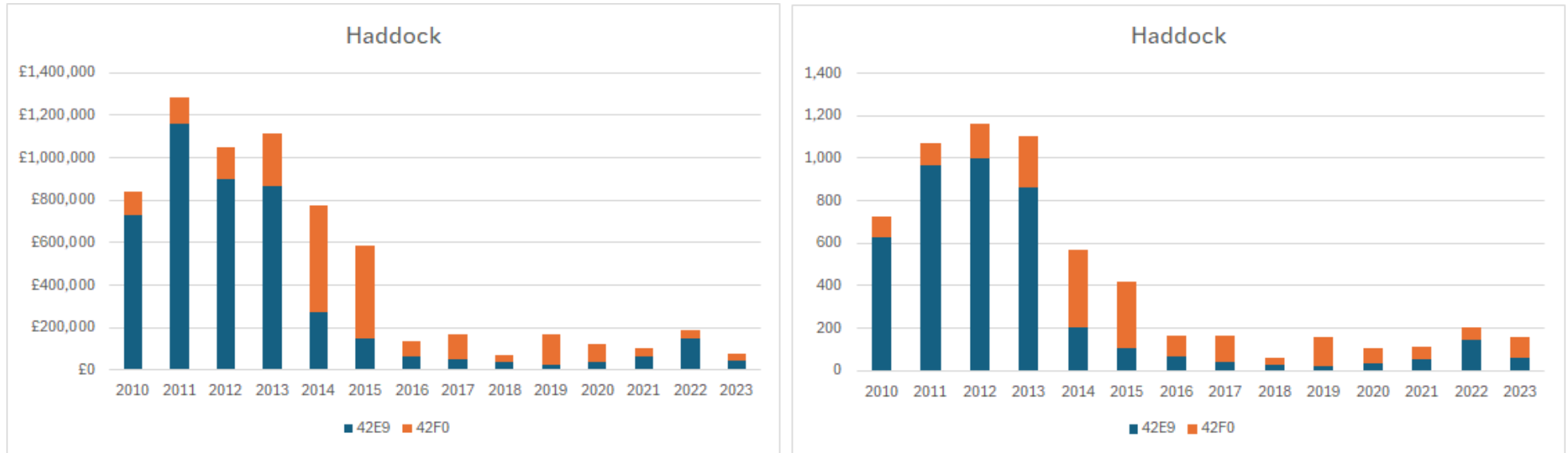
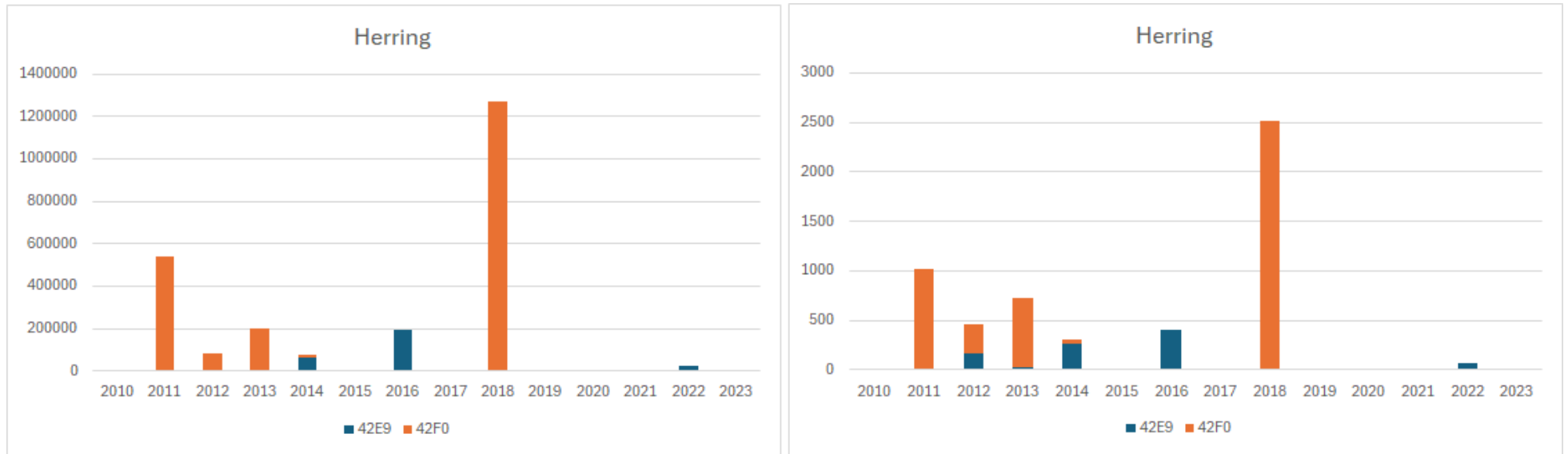


Plate 6.7: Long Term Landing Trends (First Sales Value on Left and Landed Weight on Right) for Herring from the Commercial Fisheries Local Study Area



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## 6.2 Commercial Fisheries Regional Study Area

87. Commercial fisheries statistics presenting data for the annual (2010 to 2023) annual landings value, first sales value and landed weight per species by UK vessels from the commercial fisheries regional study area (12 ICES rectangles) are shown in **Plate 6.8** to **Plate 6.10** (MMO, 2022a; 2024).
88. The statistics indicate that within this wider commercial fisheries regional study area, landings are dominated by haddock, Nephrops, herring and scallops by value and weight. With the commercial fisheries regional study area incorporating inshore fishing grounds, brown and crab and lobster are also key target species.
89. Landings are predominately made by Scottish vessels (**Plate 6.11**), operating demersal otter trawl, demersal seine, dredges, pots and traps and pelagic trawl (**Plate 6.12**).
90. UK fishing vessel landings by ICES rectangle across the commercial fisheries regional study area are shown in **Plate 6.13**. Landings are most substantial in value from ICES rectangles 43E8 (average annual value of £1.9 million) and 43E9 (£2.6 million) located to the northwest of the Bellrock WFDA.
91. Regionally, the lowest value of landings are taken from ICES rectangle 41E9 (located south of the Bellrock WFDA, with a £161,000 average annual value) and 43F1 (located northeast of the Bellrock WFDA, with a £333,000 average annual value).
92. The seasonality of landings across the commercial fisheries regional study area for key species are depicted in **Plate 6.14**. Herring are targeted in their autumn migration and particularly in August and September. Nephrops are landed year-round with a slight summer peak. Scallop landings peak in early summer and haddock landings in mid-summer.

**Plate 6.8: Annual Landings Value (£) by UK-Registered Vessels from the Commercial Fisheries Regional Study Area, by ICES Rectangle, Between 2010 and 2023**

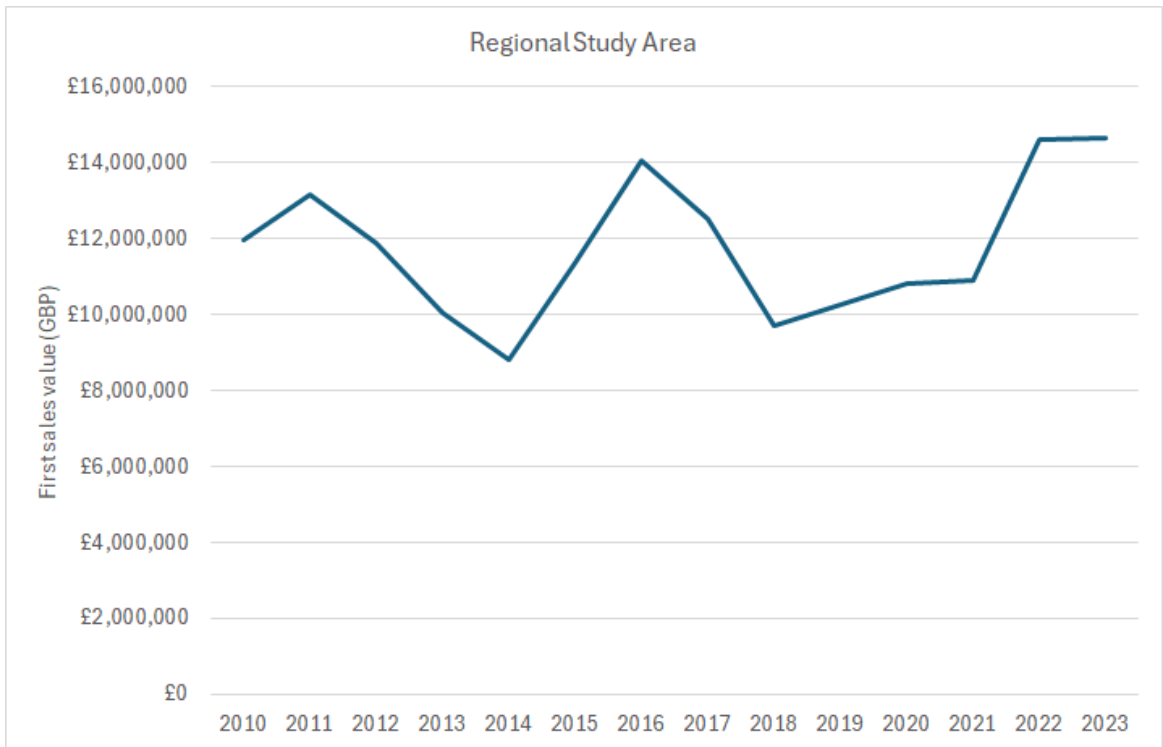


Plate 6.9: Key Species by Annual Landed Value (GBP) (2010 to 2023) from the Commercial Fisheries Regional Study Area

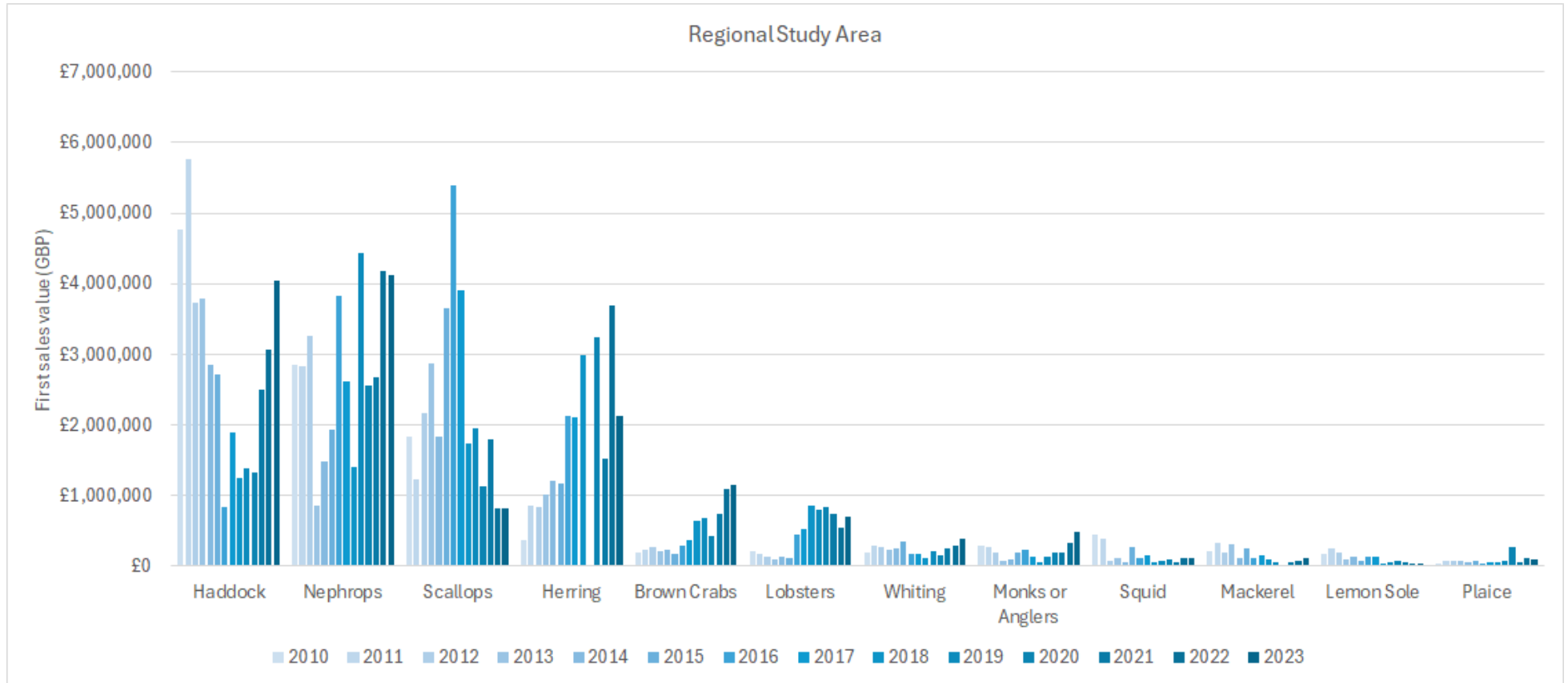


Plate 6.10: Key Species by Annual Landed Weight (Tonnes) (2010 to 2023) from the Commercial Fisheries Regional Study Area

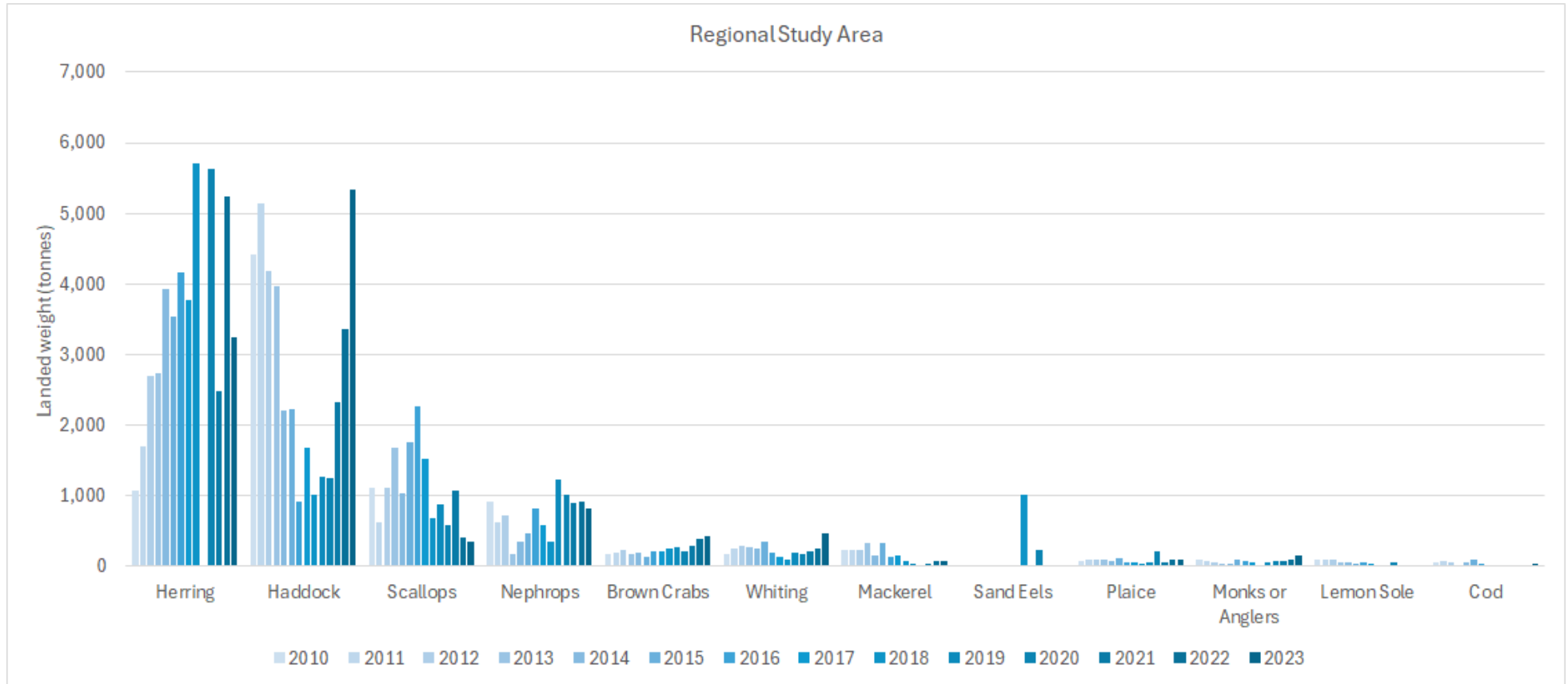


Plate 6.11: Annual Landed Value (GBP) (2010 to 2023) by Vessel Nationality from the Commercial Fisheries Regional Study Area

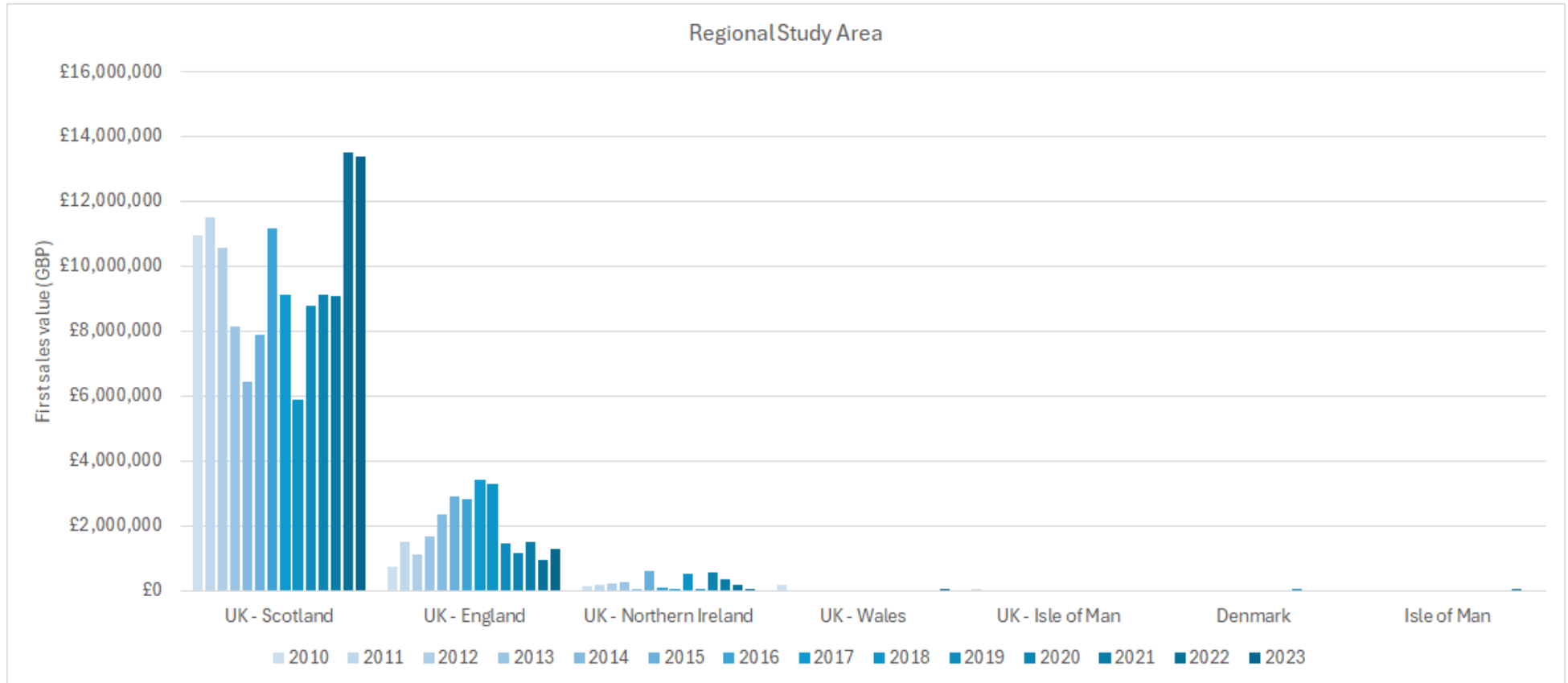


Plate 6.12: Average Annual Landed Value (GBP) (2010 to 2023) by Gear Type from the Commercial Fisheries Regional Study Area

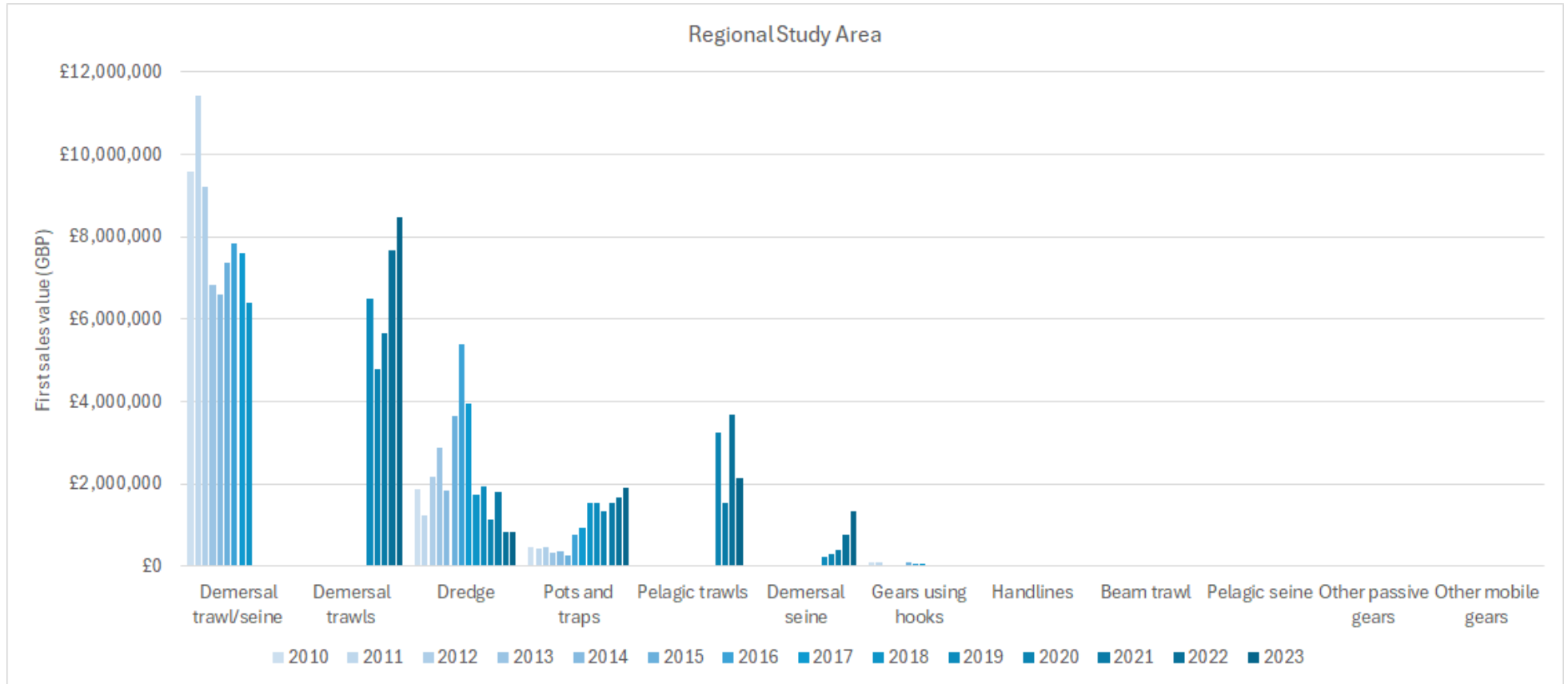


Plate 6.13: Annual Landed Value (GBP) (2010 to 2023) By ICES Rectangle from the Commercial Fisheries Regional Study Area

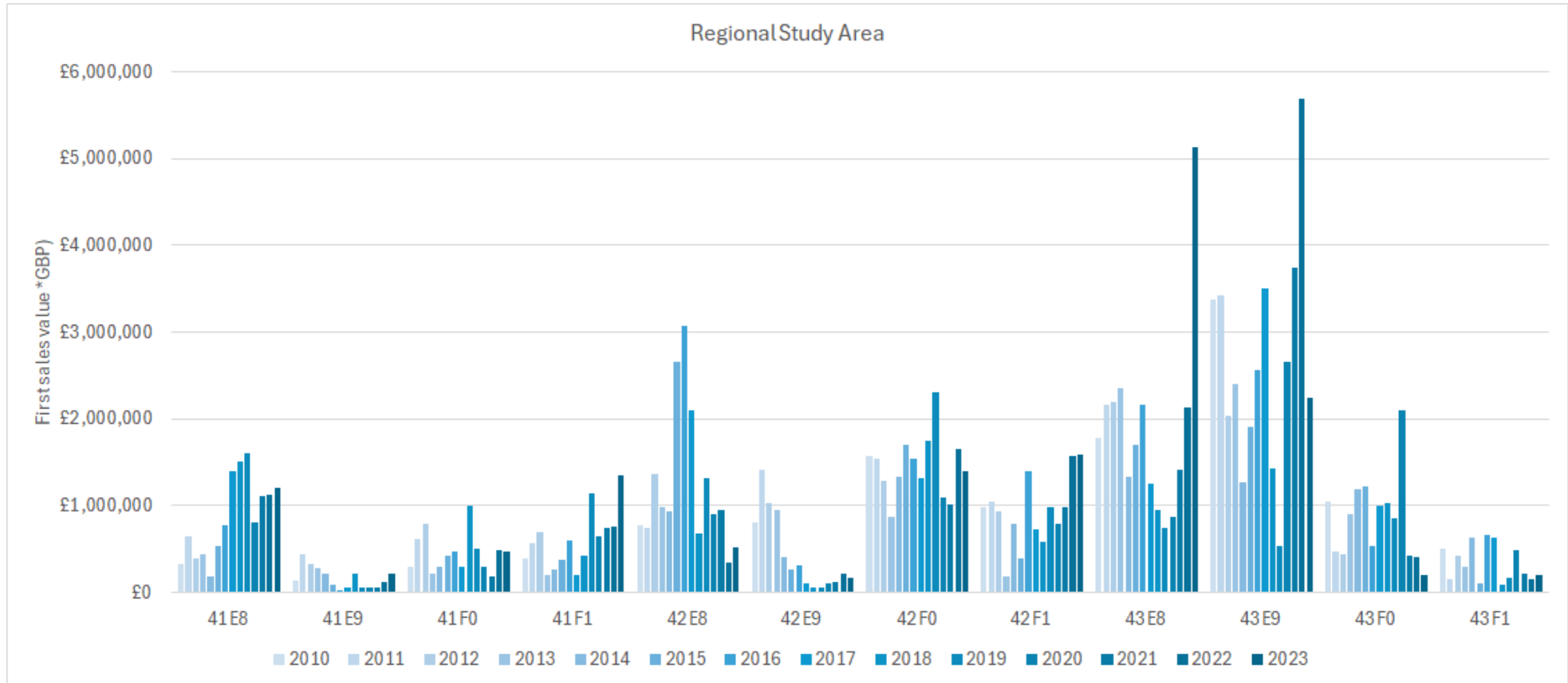
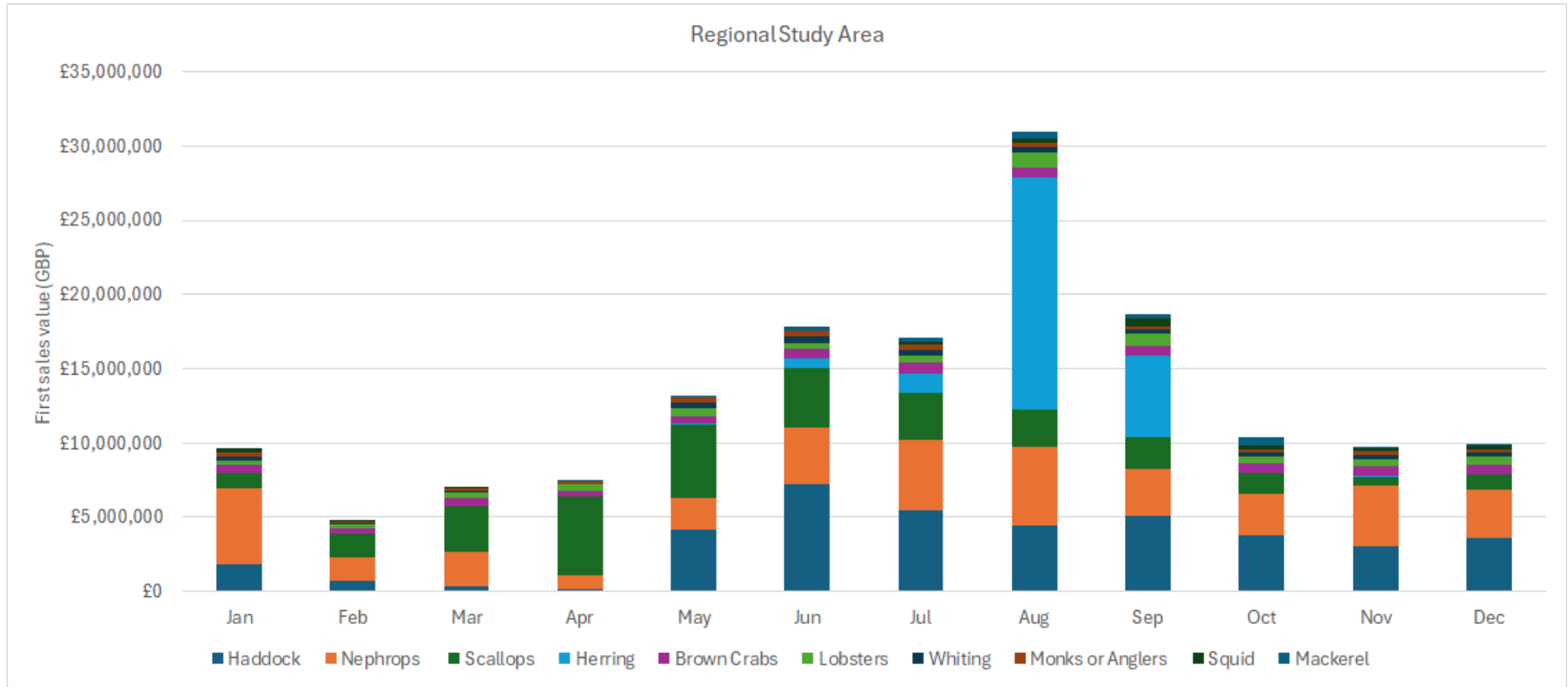


Plate 6.14: Average Monthly Landed Value (GBP) (2010 to 2023) by Species from the Commercial Fisheries Regional Study Area

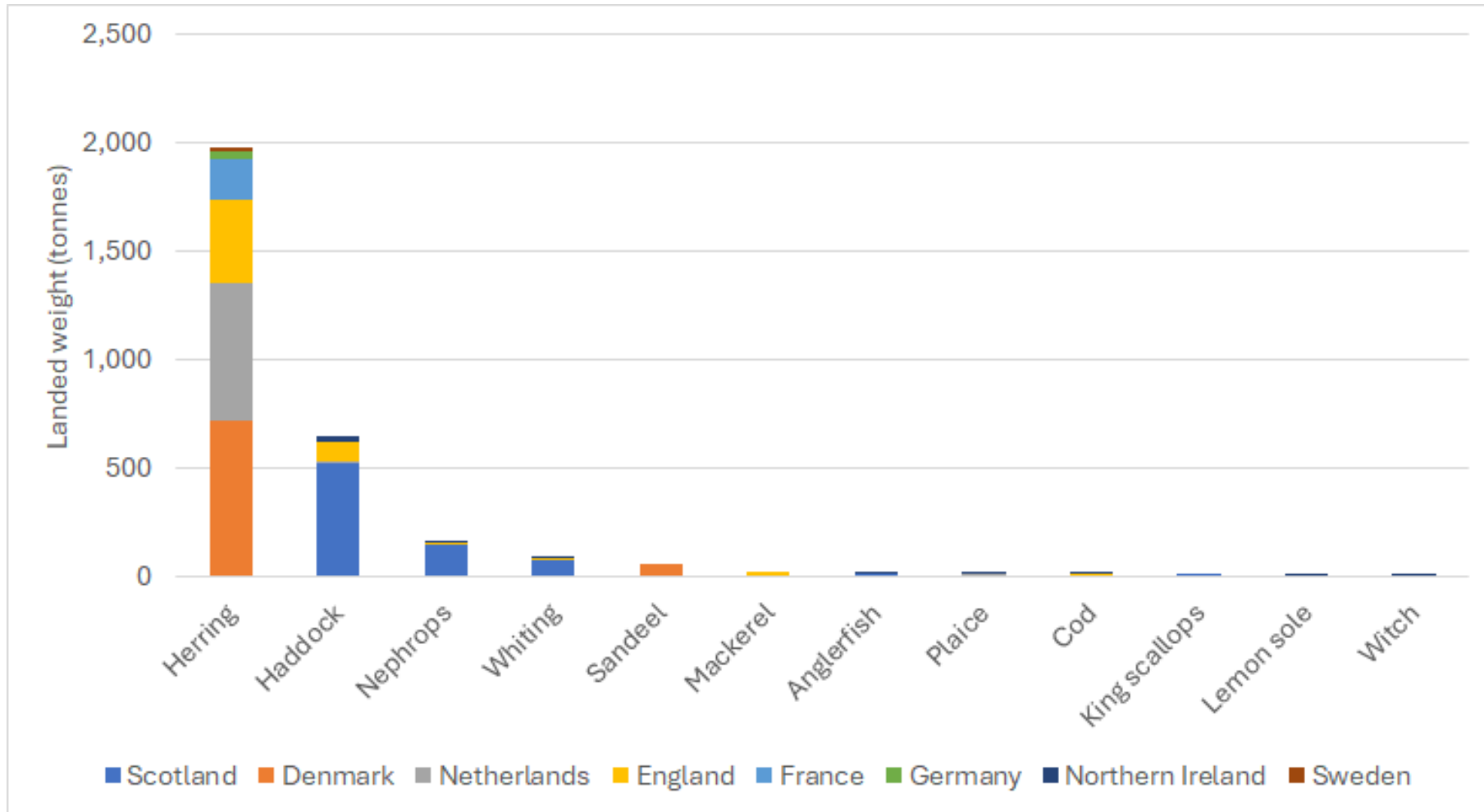


## 6.3 Landings by Non-UK Fishing Vessels

93. Landings by EU countries from the commercial fisheries local study area are shown in **Plate 6.15** (Based on Data from 2012-2016) (EU DCF, 2023) by species, indicating the average annual landed weight during the period 2012 to 2016. This data is considered historic, and pre-Brexit (i.e. before the exit of the UK from the EU), however is the most up-to-date publicly available data by ICES rectangle for all EU fleets and allows an indication of which countries may be active across the commercial fisheries local study area.
94. Vessels registered in Denmark, the Netherlands, Germany and France are recorded to fish within the commercial fisheries local study area. The key target species for these international fleets are herring and historically, sandeel. It is noted that the Sandeel (Prohibition of Fishing) (Scotland) Order came into force in March 2024, which prohibits fishing for sandeel within Scottish seas out to 200 nm (Scottish Government, 2024).
95. EU vessels are included in the spatial activity assessment provided in **Section 7**. Activity by Norwegian vessels is also captured in **Section 7**.

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Plate 6.15: Average Annual Landed Weight from the Commercial Fisheries Local Study Area by Vessel Nationality and Species



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# 7 Spatial Fishing Activity

## 7.1 Fishing Intensity Based on Vessel Monitoring System Data

96. 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. For context, active fishing restrictions are provided in **Figure 11.1.44** indicating no current fishery related restrictions across the Bellrock WFDA. It is noted, however, that as of 2024, sandeel fishing within the UK EEZ has been prohibited for all UK and non-UK vessels (Scottish Statutory Instrument 2024; Scottish Government, 2024). As indicated in landing statistics presented in **Section 6**, the sandeel fishery has not historically been heavily targeted across the commercial fisheries study areas.
97. VMS data has been obtained from five different sources, with varying details as follows:
- 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;
  - MMO VMS data displaying the first sales value (£) of catches and covering UK registered vessels 15 m and over in length from 2016 to 2020;
  - Scottish vessel VMS data sourced from the NMPi data catalogue variously displaying the first sales value (£) of catches and fishing intensity (2009 to 2013) for different gear types and target species, and for vessels under 12 m in length (2017 to 2021);
  - SPFA VMS data for their Scottish pelagic trawl member vessels for 2013 to 2021; and
  - Norwegian vessel VMS data showing fishing activity by gear type.
98. Demersal otter trawl activity is depicted in **Figure 11.1.45**, **Figure 11.1.46**, **Figure 11.1.47** and **Figure 11.1.48**, indicating sustained activity across the eastern portion of the Bellrock WFDA with relatively higher levels of activity associated with grounds to the east of the Bellrock WFDA.
99. Demersal seine activity is depicted in **Figure 11.1.49**, **Figure 11.1.50** and **Figure 11.1.51** indicating relatively low levels of sporadic activity across the Bellrock WFDA with relatively greater levels of activity to the north of the Bellrock WFDA.
100. Dredge activity is depicted in **Figure 11.1.52**, **Figure 11.1.42**, **Figure 11.1.54** and **Figure 11.1.55** indicating very limited scope for activity across the Bellrock WFDA with scallop grounds located inshore and to the west of the Bellrock WFDA, inside of the commercial fisheries regional study area, but with limited activity inside the commercial fisheries local study area.

101. Pelagic trawl activity is depicted in **Figure 11.1.56** and **Figure 11.1.57**. 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 not associated with specific seabed grounds, but with the migration route of the shoaling fish. Fishing locations are therefore generally across a wider area and vary spatially on an annual basis depending on the route taken by the fish. The VMS data indicate high values of catch taken by the pelagic trawl fleet in areas typically to the north of the Bellrock WFDA. This fishery is highly seasonal, with activity for approximately eight to 12 weeks in the year.
102. Beam trawl activity is shown in **Figure 11.1.58** and **Figure 11.1.59**. The data indicates no sustained beam trawl activity in the Bellrock WFDA.
103. Potting activity is depicted in **Figure 11.1.60**, indicating no activity by vessels over 15 m in length in the Bellrock WFDA. Potting vessels are typically smaller than 15 m in length and therefore not likely to be represented within the VMS dataset analysed here (see text below for smaller vessel activity mapping).
104. Activity of Scottish vessels under 12 m in length is depicted in **Figure 11.1.61** to **Figure 11.1.65** different gear types. The data indicates limited smaller vessel activity outside of the 12 nm limit, with activity focused inside of the 6 nm limit.
105. VMS data from 2009 to 2013 has been amalgamated and presented to show fishery intensity in **Figure 11.1.66** for squid, **Figure 11.1.67** for Nephrops, and **Figure 11.1.68** for scallop. Data is considered historical. Data indicates limited potential for the overlap of the Bellrock WFDA with key squid or scallop activity. With the commercial fisheries local study area, Nephrops fishing activity is observed to the immediate southeast and east of the Bellrock WFDA.
106. VMS data for Norwegian registered vessels is presented in **Figure 11.1.69** for the period 2011-2023, displaying VMS data for fishing vessels by gear type. The data indicate some activity in the western portion of the Bellrock WFDA associated with bottom trawls.

## 7.2 Fishing Intensity based on Automatic Identification System Data

107. Fishing vessel route density, based on vessel AIS positional data is shown in **Figure 11.1.70** for 2023 and in **Figure 11.1.71** for 2019 to 2022. AIS is required to be fitted on fishing vessels  $\geq 15$  m in length. The data is specific to fishing vessels and indicates the route density per square kilometre per year. This data does not distinguish between transiting vessels and active fishing but does provide a useful source to corroborate fishing grounds.
108. AIS data indicates very limited activity of fishing vessels across the Bellrock WFDA. Within the commercial fisheries local study area, the observations of higher vessel density most proximate to the Bellrock WFDA are located to the immediate east and expected to be associated with demersal trawl activity. These observations are relatively consistent across the mapped data period of 2019 to 2023.

## 7.3 Fishing Activity Based on Marine Directorate Surveillance Data

109. Fisheries surveillance data from 2017 to 2022 has been sourced from the Marine Directorate and is presented in **Figure 11.1.73**. Fisheries surveillance data corroborates other data sources, with relatively limited fishing vessel observations in the Bellrock WFDA. Within the commercial fisheries local study area, the observations most proximate to the Bellrock WFDA are located to the immediate east and expected to be associated with demersal trawl activity.

## 7.4 Fisheries Sensitivity Mapping and Displacement Mapping

110. The Fisheries Sensitivity Mapping and Displacement Modelling (FiSMaDiM) project has been funded by The Crown Estate and led by Cefas, in collaboration with the University of St Andrews and the Scottish Government. It's aim has been 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).

111. The FiSMaDiM Public Web App was published in 2025 (Cefas, 2025), with mapping, based on merged AIS and VMS data, obtained from the App.

112. The FiSMaDiM data provides one of the most robust and detailed datasets available for mapping the spatial distribution of fishing activity across the UK EEZ and includes the following features:

- Cumulative, long-term coverage (2012–2021):
  - FiSMaDiM integrates a full decade of fishing activity, allowing both inter-annual and seasonal variation to be captured; and
  - This long time series makes it possible to distinguish persistent fishing grounds from areas of more variable or opportunistic effort.
- Integration of VMS and AIS data:
  - The dataset combines VMS (mandatory for most vessels >12 m) and AIS data (carried by a wider range of vessels, including smaller ones);
  - This dual-source approach ensures more complete coverage of fishing fleets; and
  - The use of both systems provides a finer temporal and spatial resolution (~20 minutes, gridded across the UK EEZ), improving the accuracy of activity estimates.

- Inclusion of smaller vessels:
  - Previous mapping efforts were biased towards larger vessels required to carry VMS;
  - FiSMaDiM addresses this gap by incorporating AIS signals from smaller vessels, including many under 12 m that account for a significant share of inshore and nearshore activity; and
  - This provides better (although not comprehensive) representation of inshore static gear fisheries (e.g. creeling, potting) that are particularly important in Scotland and other coastal regions.

113. FiSMaDiM data presenting long term effort (hours fishing) and number of vessels, cumulatively for the period 2012-2021 is provided for the following gear types:

- Demersal otter trawl shown in **Figure 11.1.74** and **Figure 11.1.75**;
- Demersal seine shown in **Figure 11.1.76** and **Figure 11.1.77**;
- Dredge shown in **Figure 11.1.78** and **Figure 11.1.79**;
- Pelagic trawl shown in **Figure 11.1.80** and **Figure 11.1.81**; and
- Potting shown in **Figure 11.1.82** and **Figure 11.1.83**.

## 7.5 Fishing Activity Based on Marine Traffic Survey Data

114. Based on analysis of marine traffic AIS data (noting AIS is mandatory for fishing vessels of 15 m in length and over) covering a 12-month period (Anatec, 2024a), it was found that an average of one fishing vessel every two days was recorded within the study area (in this case the Bellrock WFDA plus a 10 nm buffer, the shipping and navigation study area) during 2023, with one every six days within the Bellrock WFDA itself. The majority of fishing vessels were observed transiting in a northwest/southeast direction; however a proportion were also seen exhibiting potential active fishing behaviour. Five fishing vessels were seen potentially fishing in an area of relatively higher water depths (at least 100 m below Chart Datum) to the southeast, and within the eastern portion of, the Bellrock WFDA.

115. During the summer 2024 marine traffic survey (Anatec, 2024b), covering the same study area as that described immediately above, fishing vessels accounted for 4% of all vessel traffic recorded within the study area during the survey period, corresponding to an average of one unique fishing vessel recorded every two to three days. Five different fishing vessels were recorded during the survey period, all of which were trawlers. All but one trawler was noted to be transiting north through the study area and all destinations broadcast were “fishing grounds”. Lengths of the trawlers ranged from 81 m to 140 m. One trawler was recorded to intersect the Bellrock WFDA; others were recorded in the wider study area.

## 7.6 Fishing Activity Based on Other Data Sources

116. A representative sample of fishing vessel plotter data for the Bellrock WFDA has been provided in confidence to the Applicant by the SFF. The plotter data depicts the activity of SFF member vessels and indicates the presence of fishing vessel activity across the Bellrock WFDA, with vessels generally shown to be navigating in a northwest/southeast direction.

## 8 Future Baseline

117. 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 to 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 sustainability of fish and shellfish products, such as the Marine Stewardship Council certification, industry is adapting to improve fisheries management and wider environmental impacts;
  - Fleet size: based on the combination of the above factors, the fleet size (i.e. number of vessels and overall capacity) of the UK fishing sector may change, including increases in response to positive changes and decreases in response to negative changes; and
  - Other marine infrastructure and spatial pressures: increasing competition for sea space from multiple offshore developments, including offshore wind farms, subsea cables and other marine industries, can restrict access to traditional fishing grounds. This marine spatial conflict may displace fishing activity, alter fishing patterns, and increase operational costs as vessels adapt to avoid infrastructure or navigate more congested areas.
118. A recent example of how fisheries management can change the baseline relates to sandeel. UK vessels have had no quota allocation for sandeel since 2021, coinciding with a substantial drop in their landings: for example, Area 4 landings by UK vessels fell from over 1,000 tonnes in 2019 to around 3-4 tonnes in 2021-2022, under monitoring fishery levels. Though quotas have still been set for all vessels (UK and EU) under the UK/EU Trade and Cooperation Agreement, these have been very low. In March 2024, a prohibition on sandeel fishing in ICES Area 4 came into force for all vessels (UK and non-UK) in UK waters thus formalising the closure. This change significantly shifts the baseline for sandeel landings in the UK EEZ (Scottish Statutory Instrument 2024; Scottish Government, 2024).

119. Another example of changing fisheries patterns relates to the recent prohibition of scallop dredging in the Dogger Bank Special Area of Conservation. Many of the UK scallop vessels that operate outside 12 nm will target areas throughout the UK, including the central North Sea, English Channel, Irish Sea and West of Scotland. Restrictions on fisheries due to environmental management can displace the activity and also lead to higher reliance on existing grounds.
120. 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 ten years of key baseline data. Given the time periods assessed, the future baseline scenario would typically be reflected within the current baseline assessment undertaken. However, in this case, existing baseline data do not fully capture potential changes in commercial fisheries activity resulting from the withdrawal of the UK from the EU.
121. Following withdrawal, the UK and the EU have agreed to a Trade and Cooperation Agreement, applicable on a provisional basis from 1 January 2021. The Trade and Cooperation Agreement sets out fisheries rights and confirms that from 1 January 2021 and during the 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.
122. Twenty five percent of the EU's fisheries quota in UK waters are being transferred to the UK over the five-year transition period; most of this quota has already been transferred and distributed across the four nations of the UK. After the five-year transition there will be annual discussions on fisheries opportunities. 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. There has been limited change in the overall UK share for plaice and sole, the key fisheries targeted by non-UK vessels, notably Dutch and Belgian beam trawlers.
123. 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.
124. In relation to the effects of the COVID pandemic, MMO annual reporting notes that the effects of the pandemic on the UK fishing industry were felt from March 2020. The MMO UK Sea Fisheries Statistics 2021 report observes that an increase in overall UK landings quantity and value in 2021 (relative to 2020) largely reflected recovery from the COVID period and additional quota available to the UK fleet after leaving the EU (MMO, 2022).

125. Commercial fisheries receptors (i.e. relevant fishing fleets) could theoretically be impacted by climate change over the lifetime of the Bellrock Project. Increased sea temperature/change in pH levels have the potential to affect the distribution of commercially targeted fish and shellfish stocks in the commercial fisheries study areas. Changes may result from changes in seabed habitat or natural disturbance events. Changes would be expected to have limited effects on mobile species, but with potential for effects on substrate-dependent species such as herring, and on shellfish. Changes may in turn affect commercial fishing activity in the commercial fisheries study areas over the long-term; for example, altering fishing methods, targeted grounds and seasonal patterns in activity. An increase in storm events may also directly impact fishing activity in the commercial fisheries study areas, with changes with seasonal fishing patterns in response to changes in weather and periods of safe fishing conditions.

## 9 Summary

126. In summary, based on the data gathered to inform this commercial fisheries baseline report, the key fleets operating across the commercial fisheries study areas are identified in **Table 9.1**.
127. This commercial fisheries baseline report reviewed all datasets available to characterise the commercial fisheries activity across the commercial fisheries local and regional study areas. Given the range of datasets assessed and the comprehensive analysis undertaken, it is considered that this baseline report is adequate for the purposes of a robust EIA.

**Table 9.1: Summary of Fishing Fleets Active in the Commercial Fisheries Study Areas, and Identified as Commercial Fisheries EIA Receptors**

Fishing Fleet (EIA Receptor)	Overview
UK demersal otter trawl	Primarily Scottish registered vessels, over 15 m in length, targeting Nephrops and haddock.  Activity across the Bellrock WFDA and commercial fisheries study areas.
UK demersal seine	Primarily Scottish registered vessels, over 15 m in length, targeting haddock.  Low levels of activity in the Bellrock WFDA, some activity in the commercial fisheries study areas.
UK pelagic trawl	Scottish and English registered vessels, over 40 m in length, targeting herring sporadically.  Low levels of activity in the Bellrock WFDA, some activity in the commercial fisheries study areas.
UK dredge	Primarily Scottish registered vessels, over 15 m in length, targeting king scallop.  No activity in the Bellrock WFDA, active in the commercial fisheries study areas.
UK potting	Scottish registered vessels, under and over 10 m in length, targeting brown crab and other shellfish.  No activity in the Bellrock WFDA, active in the commercial fisheries study areas.
Non-UK pelagic trawl	Norwegian, Danish, Dutch, French and German registered vessels, over 15 m in length, targeting herring.
Non-UK demersal trawl	Norwegian registered vessels, over 15 m in length.

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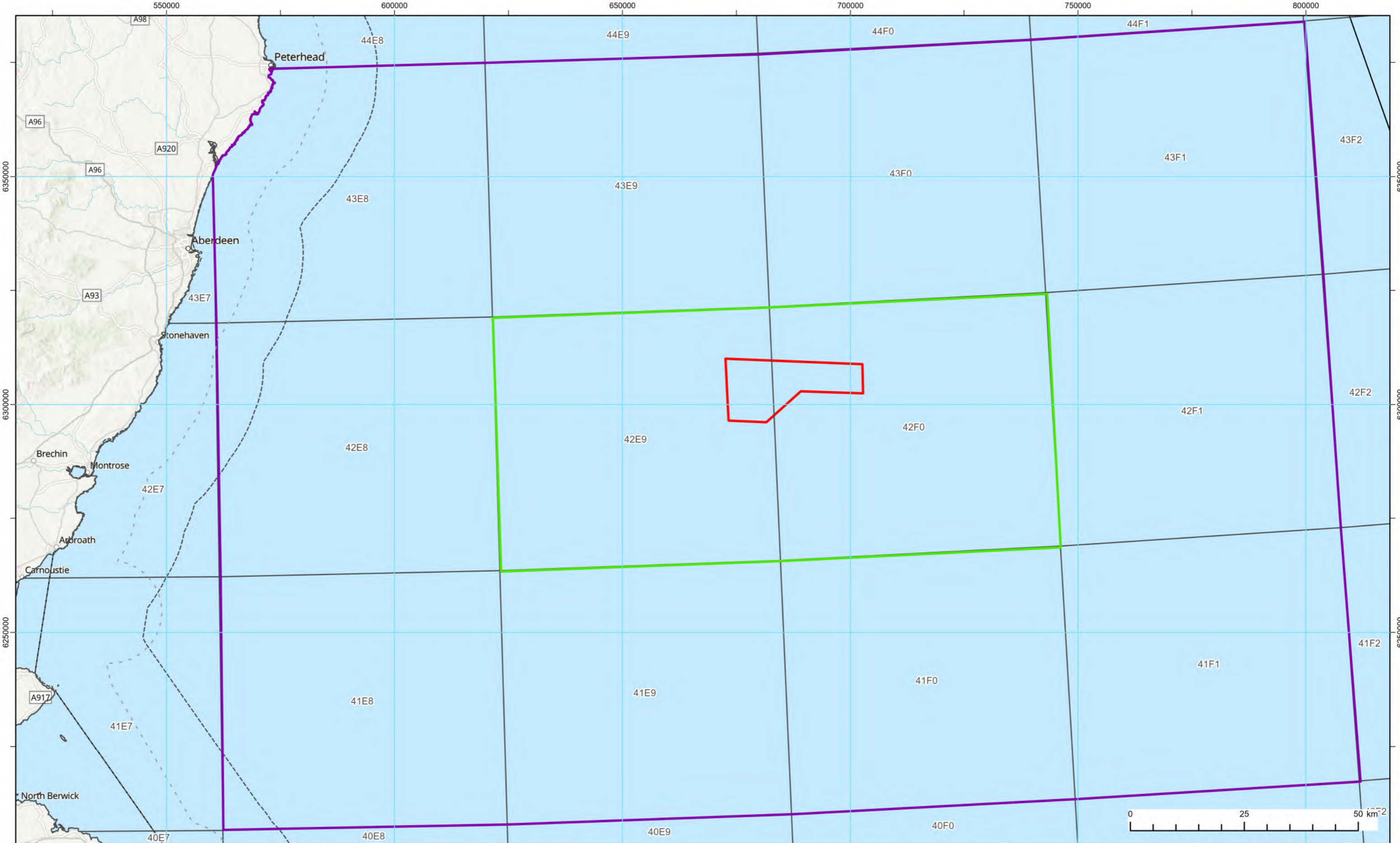
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# Annex 1: Figures

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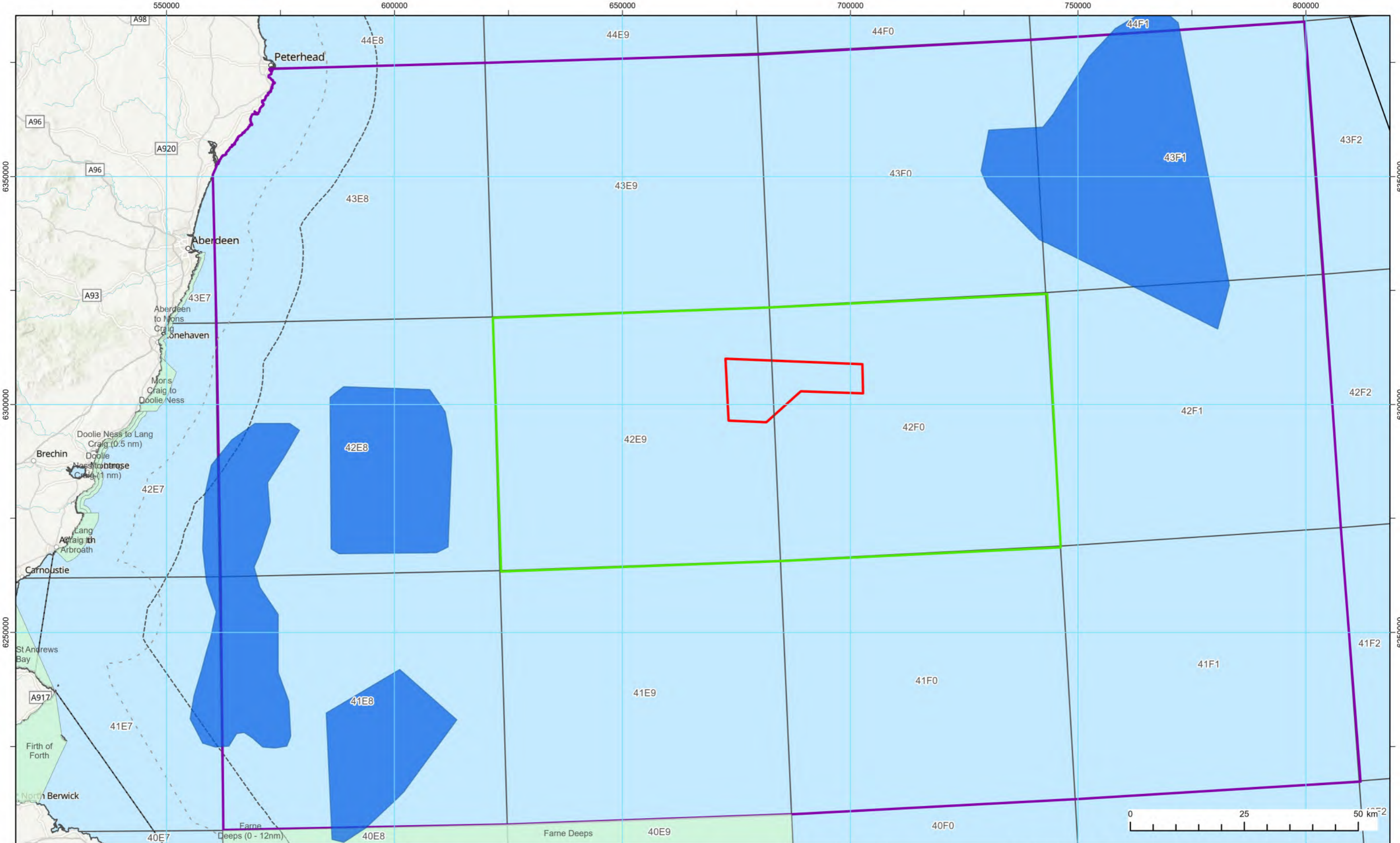


**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- Exclusive Economic Zone Boundary
- 12 nm Limit
- 6 nm Limit

1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
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Figure Title: <b>Bellrock Wind Farm Development Area (WFDA) Commercial Fisheries Study Areas</b>	
Project: Bellrock Wind Farm Development Area (WFDA)	Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report
Drawing No.: RHDV_BEL_CST_REP_0003_088	<b>Figure 11.1.1</b>

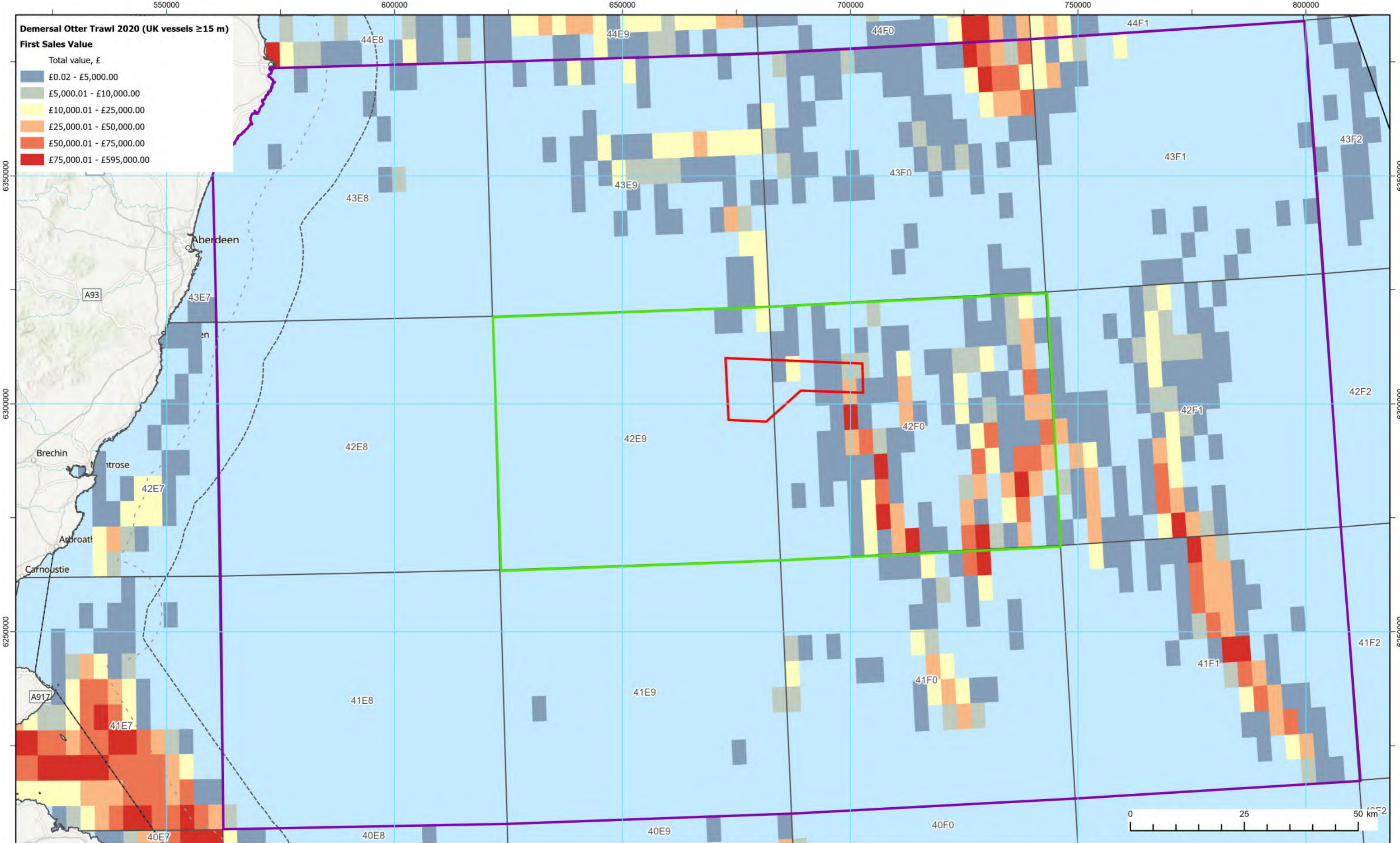


**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- Active Fishing Restrictions
- Offshore Marine Protected Areas with Proposed Fisheries Management
- 12 nm Limit
- 6 nm Limit

1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
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Project: Bellrock Wind Farm Development Area (WFDA)	Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report
Drawing No.: RHDV_BEL_CST_REP_0003_089	<b>Figure 11.1.2</b>



**Demersal Otter Trawl 2020 (UK vessels ≥15 m)**  
**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



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N  
 Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.

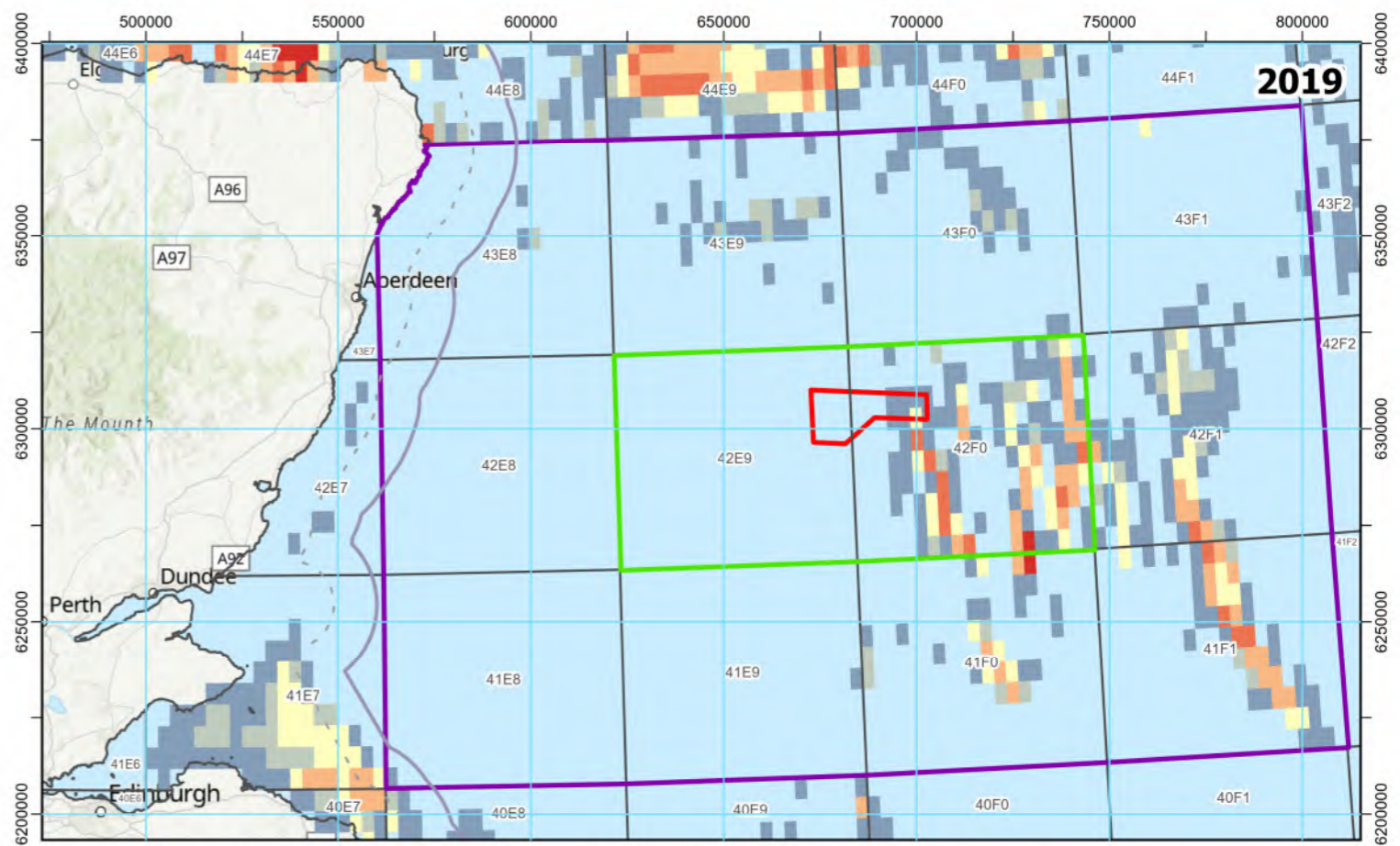
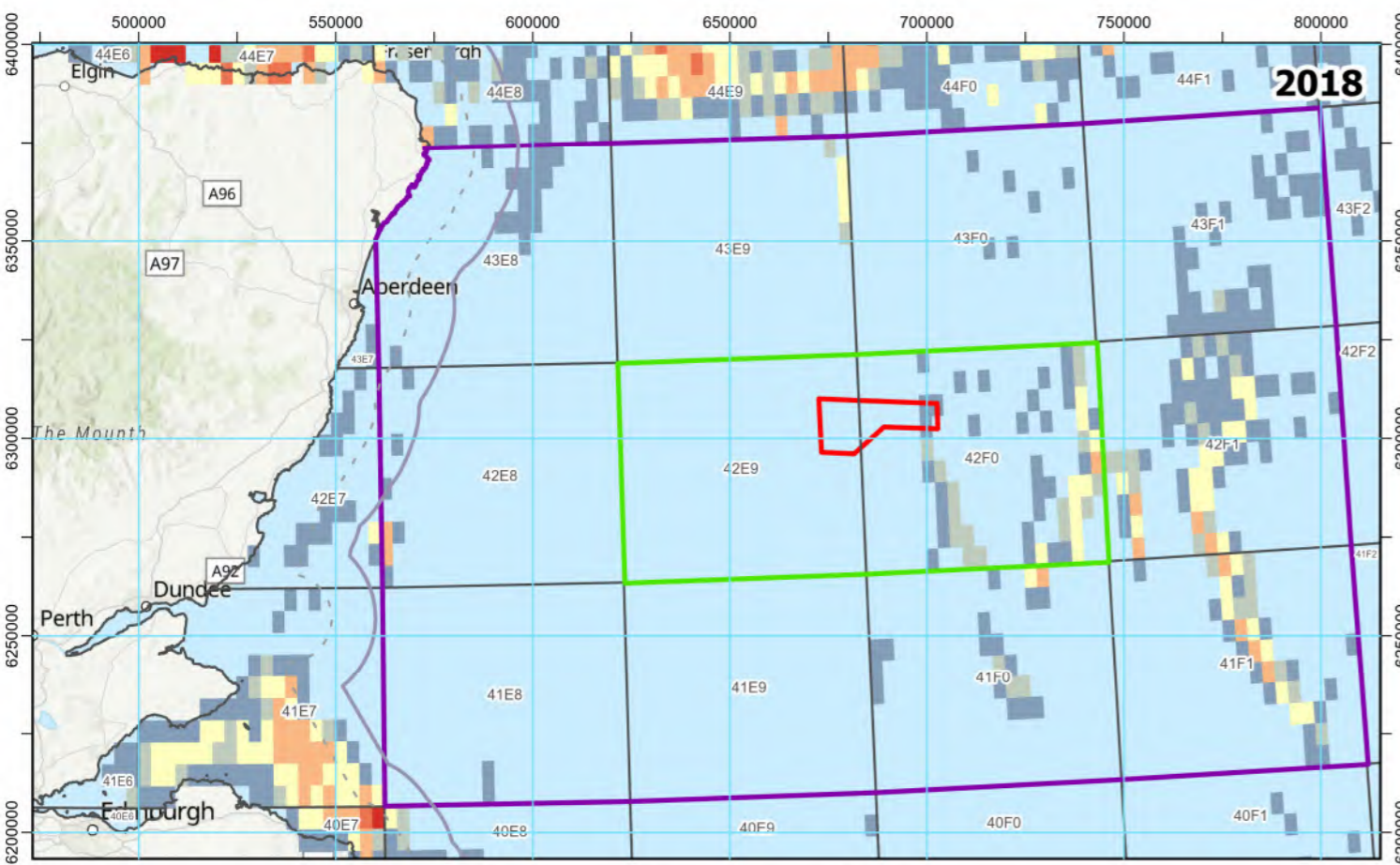
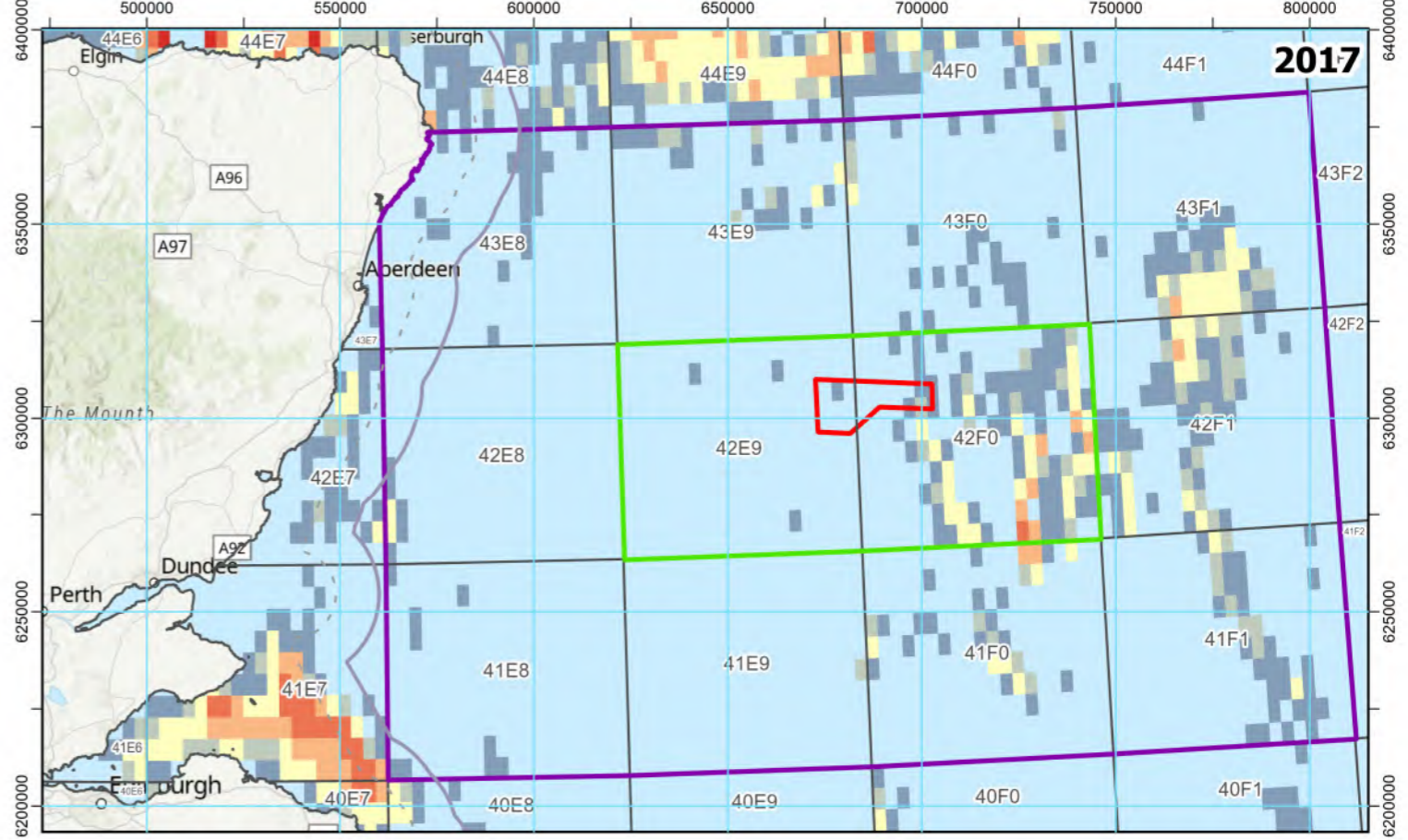
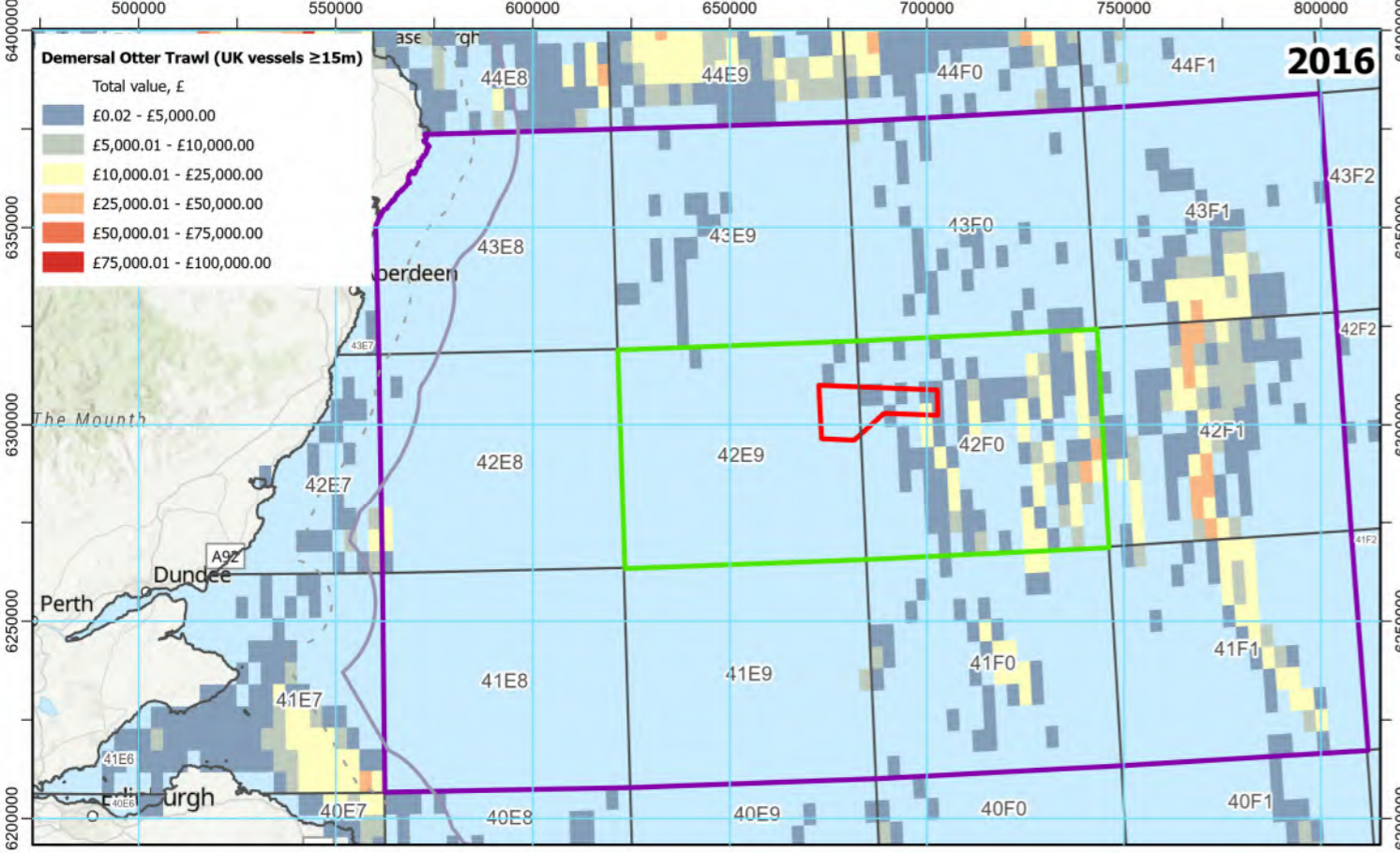
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Figure Title: **Demersal Otter Trawl Vessel Monitoring System Data for UK Vessels ≥15 m, 2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_090 **Figure 11.1.3**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 6 nm Limit
- 12 NM limit

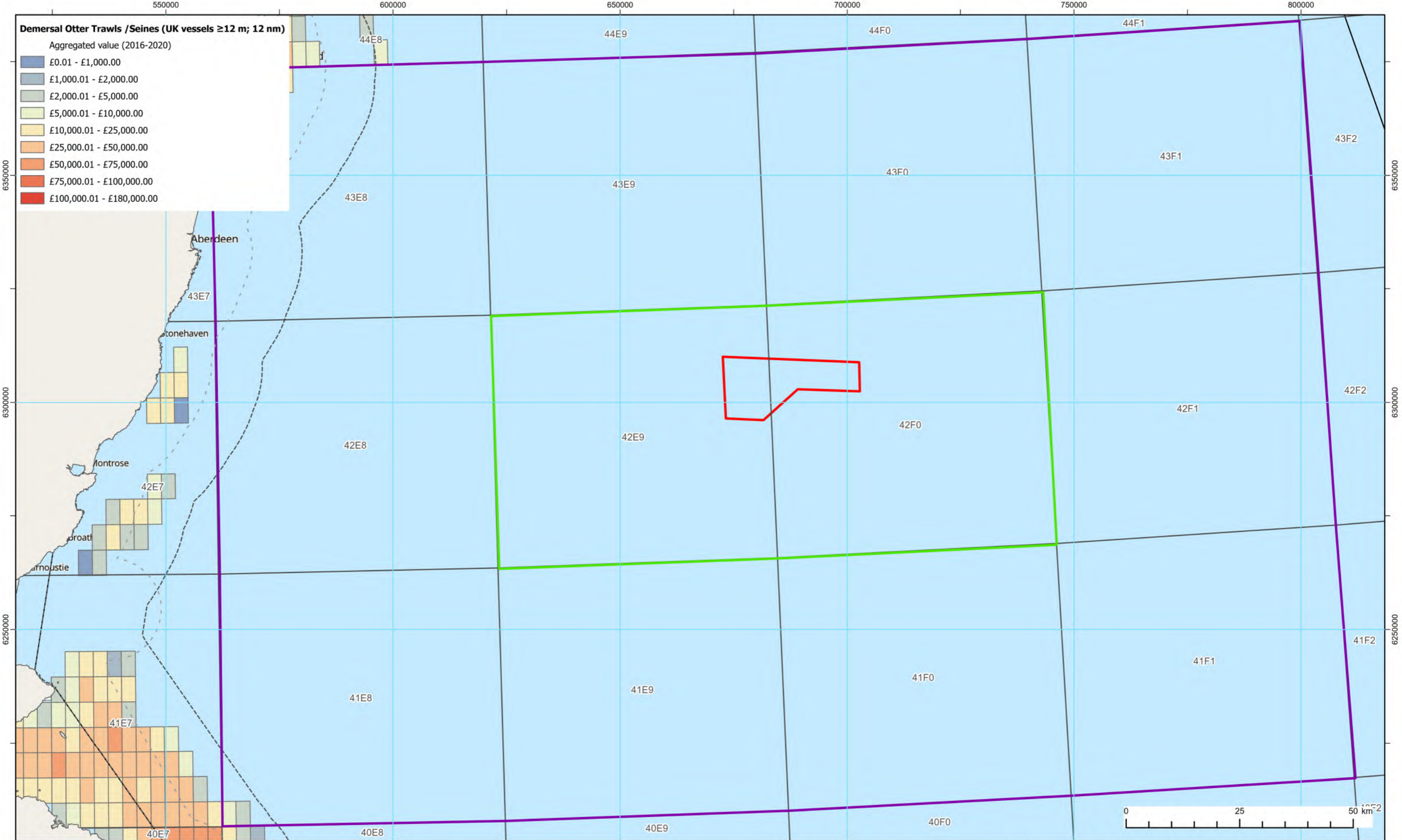
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**Figure Title:**  
**Demersal Otter Trawl Vessel Monitoring System Data for UK Vessels ≥ 15 m, 2016-2019**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_091 **Figure 11.1.4**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

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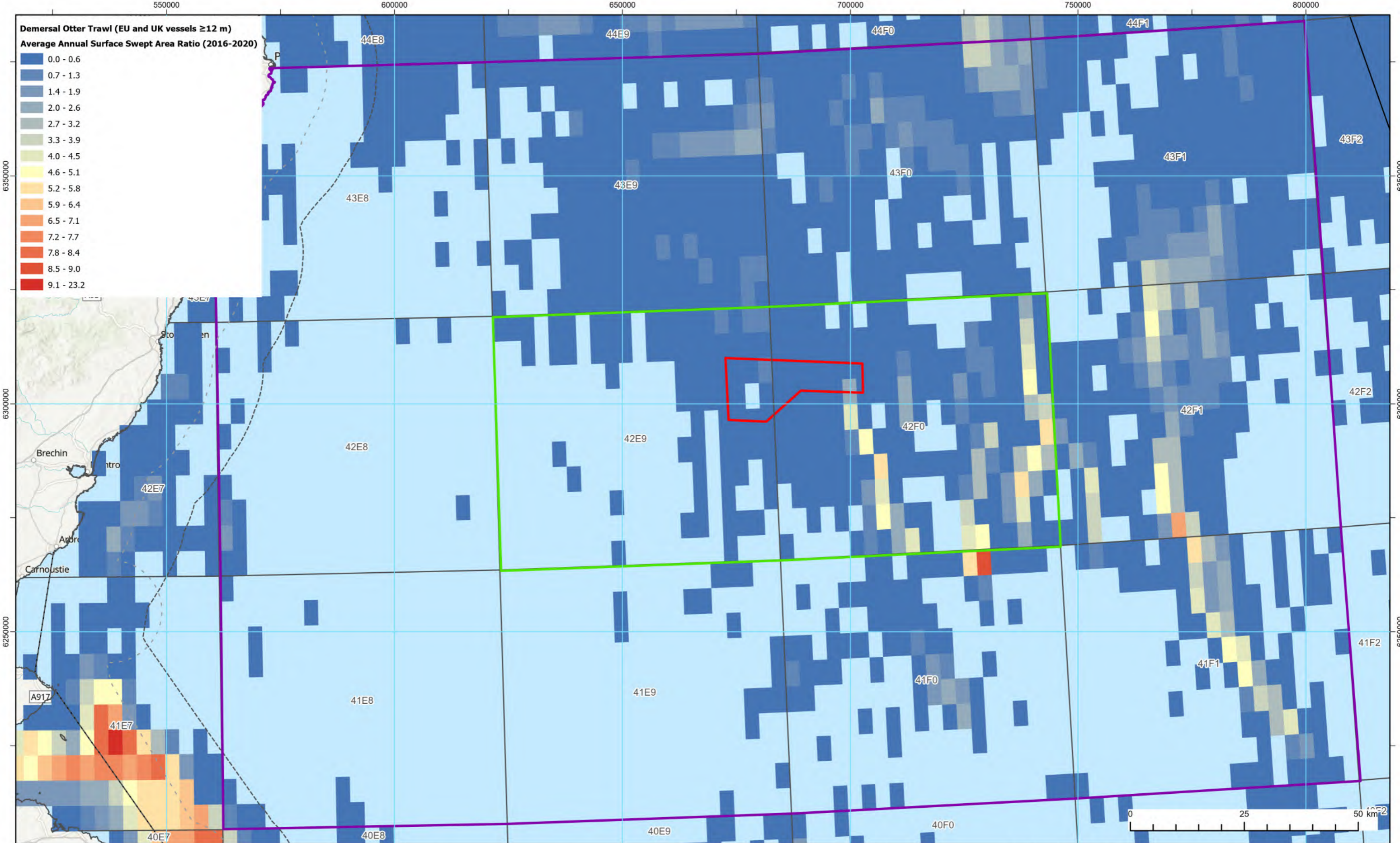
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Figure Title:  
**Demersal Trawl and Seine UK Vessels ≥12 m, inside 12 nm**

Project: Bellrock Wind Farm Development Area (WFDA)  
 Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_092 **Figure 11.1.5**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

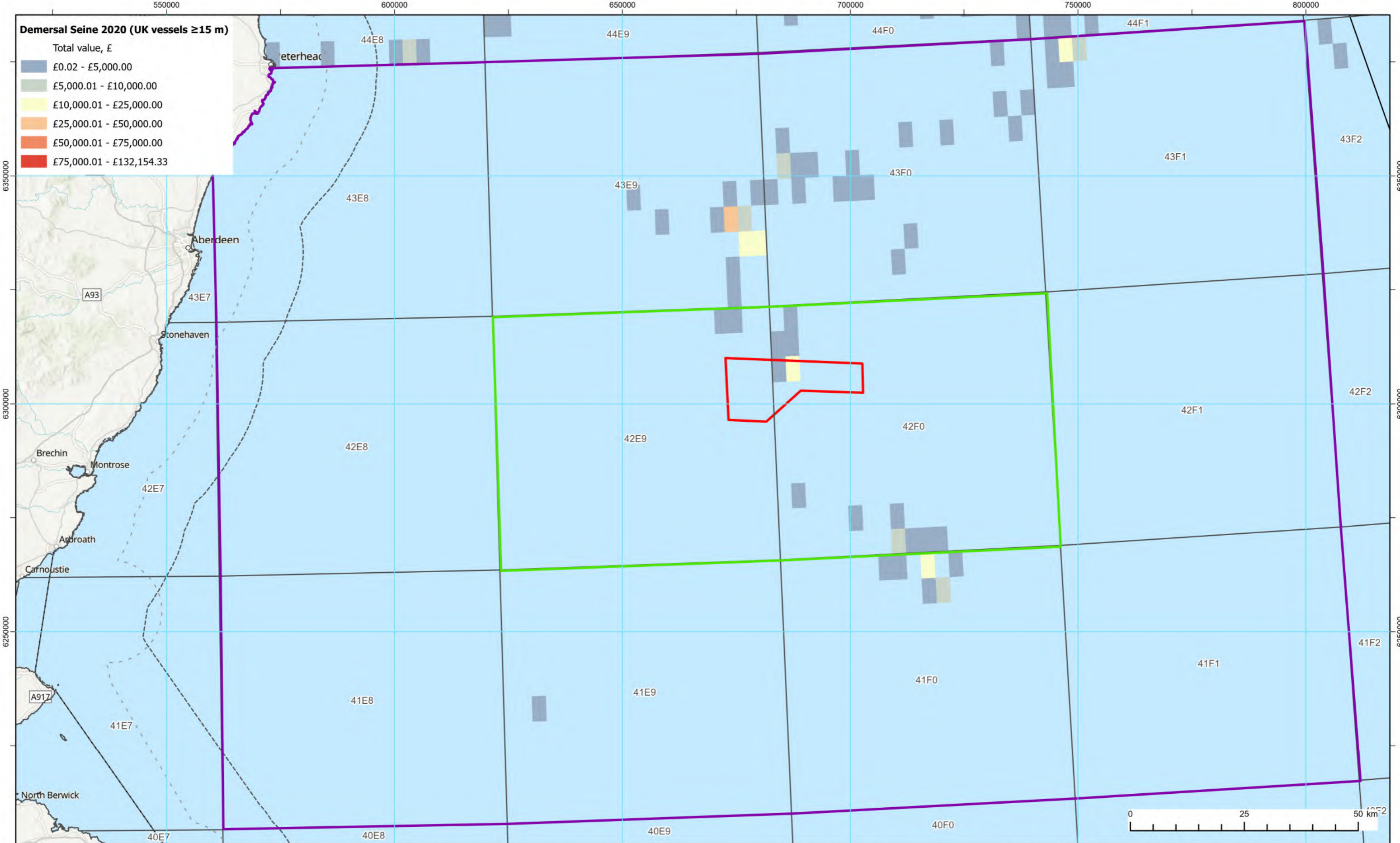
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Scale @ A3			1:750,000		

Figure Title: **Demersal Otter Trawl Average Annual Surface Swept Area Ratio For EU and UK Vessels ≥12 m, 2016-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_093 **Figure 11.1.6**



**Demersal Seine 2020 (UK vessels ≥15 m)**

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



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

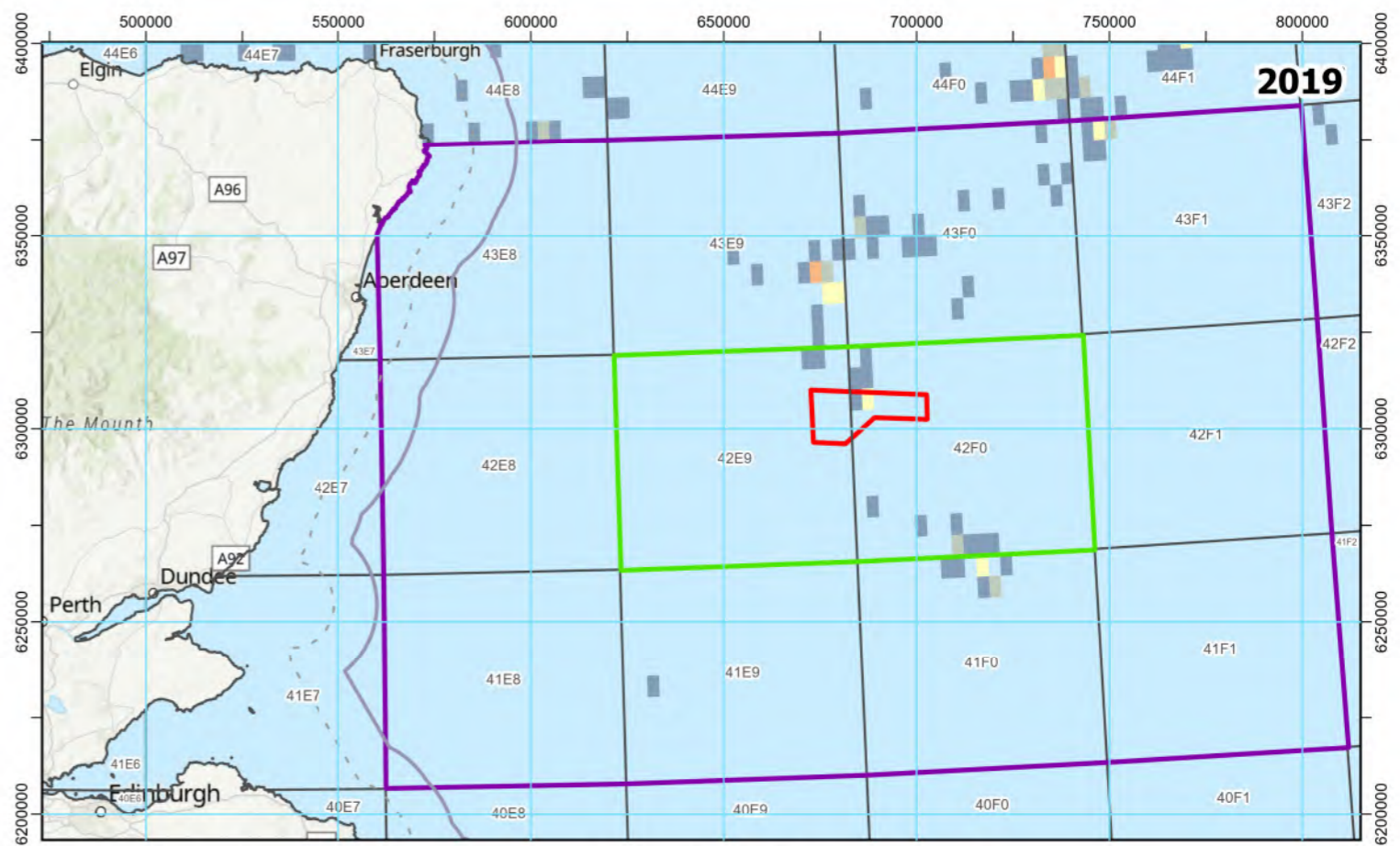
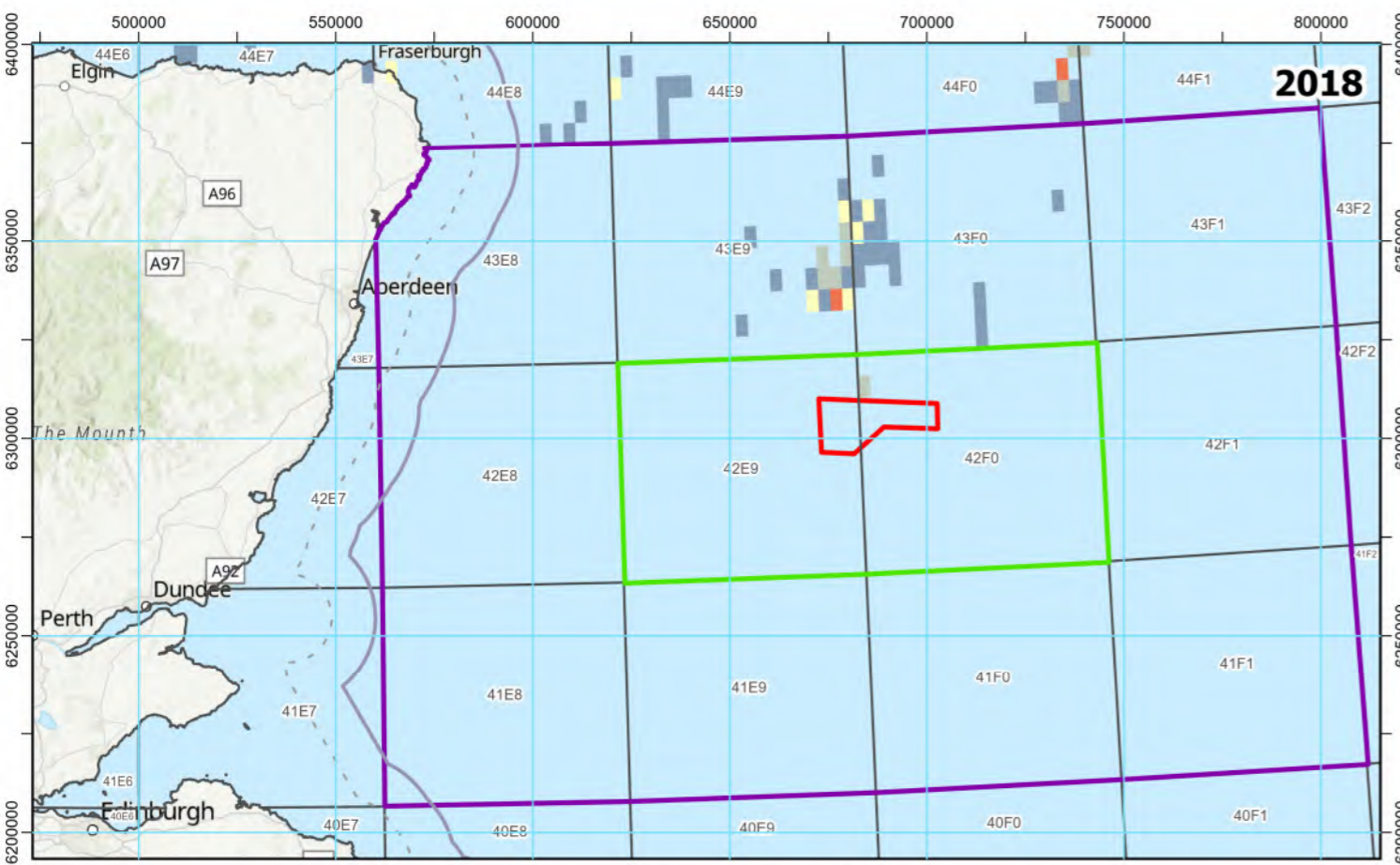
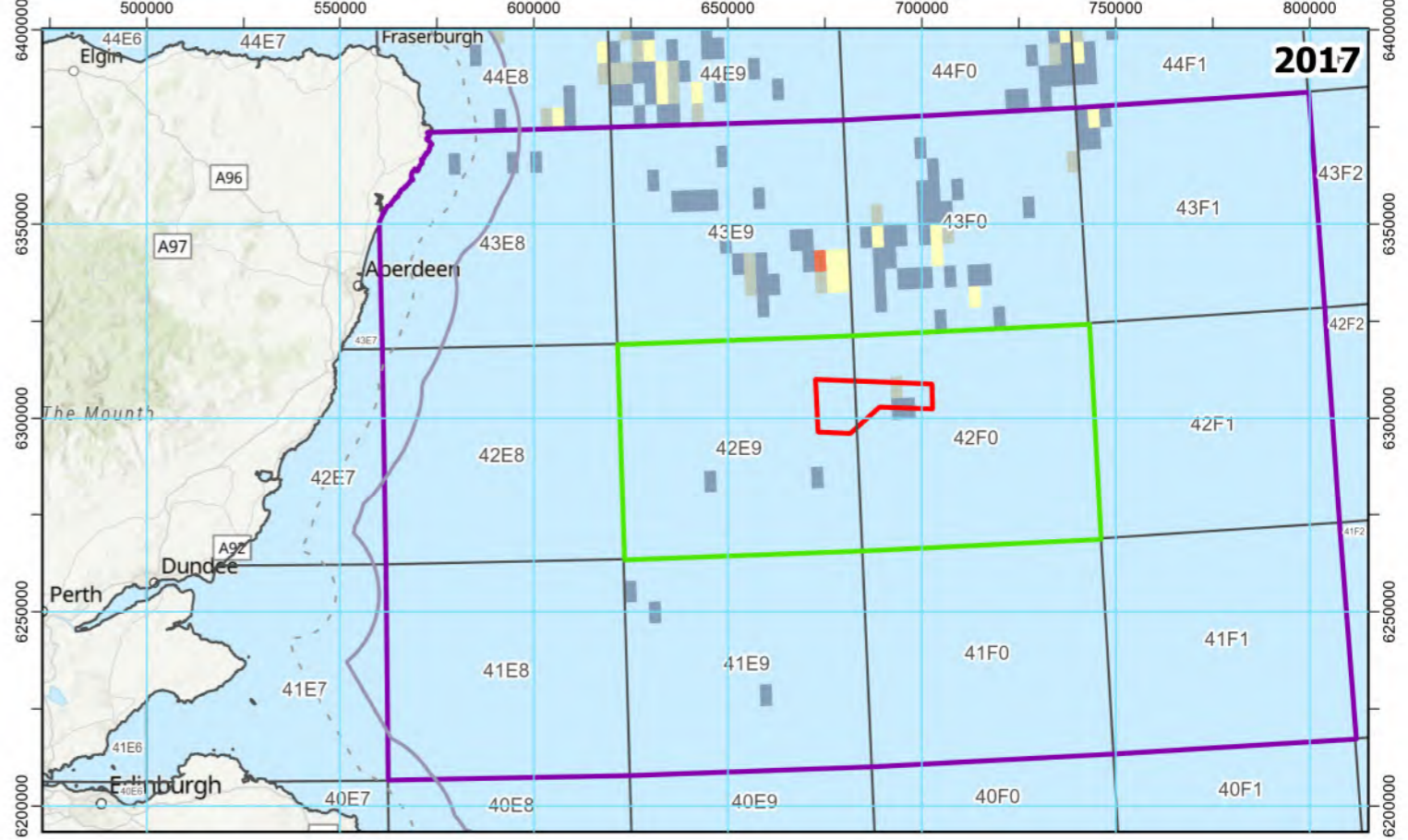
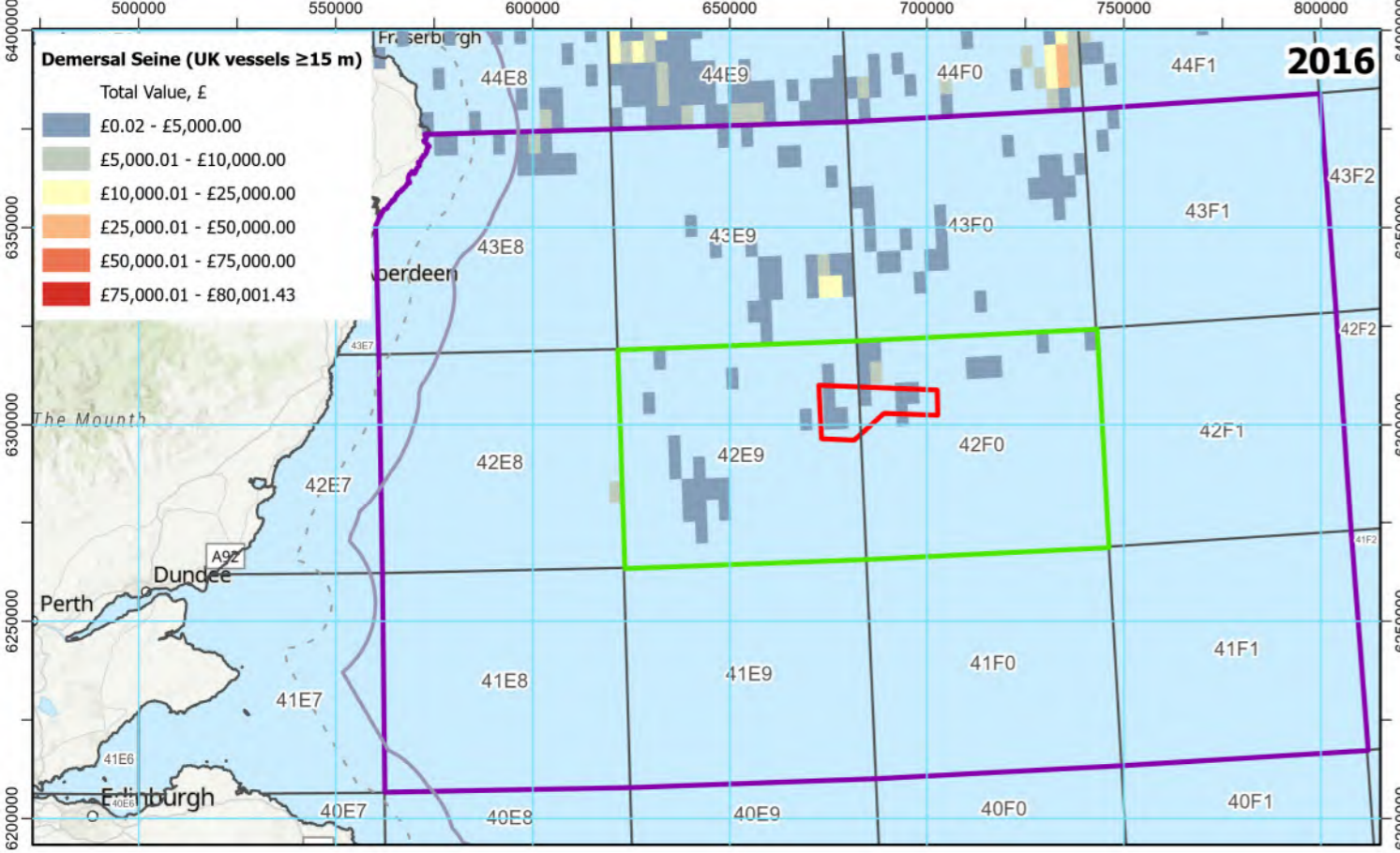
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Scale @ A3			1:750,000		

Figure Title: **Demersal Seine Vessel Monitoring System Data for UK Vessels ≥ 15 m, 2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_094 **Figure 11.1.7**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 6 nm Limit
- 12 NM limit

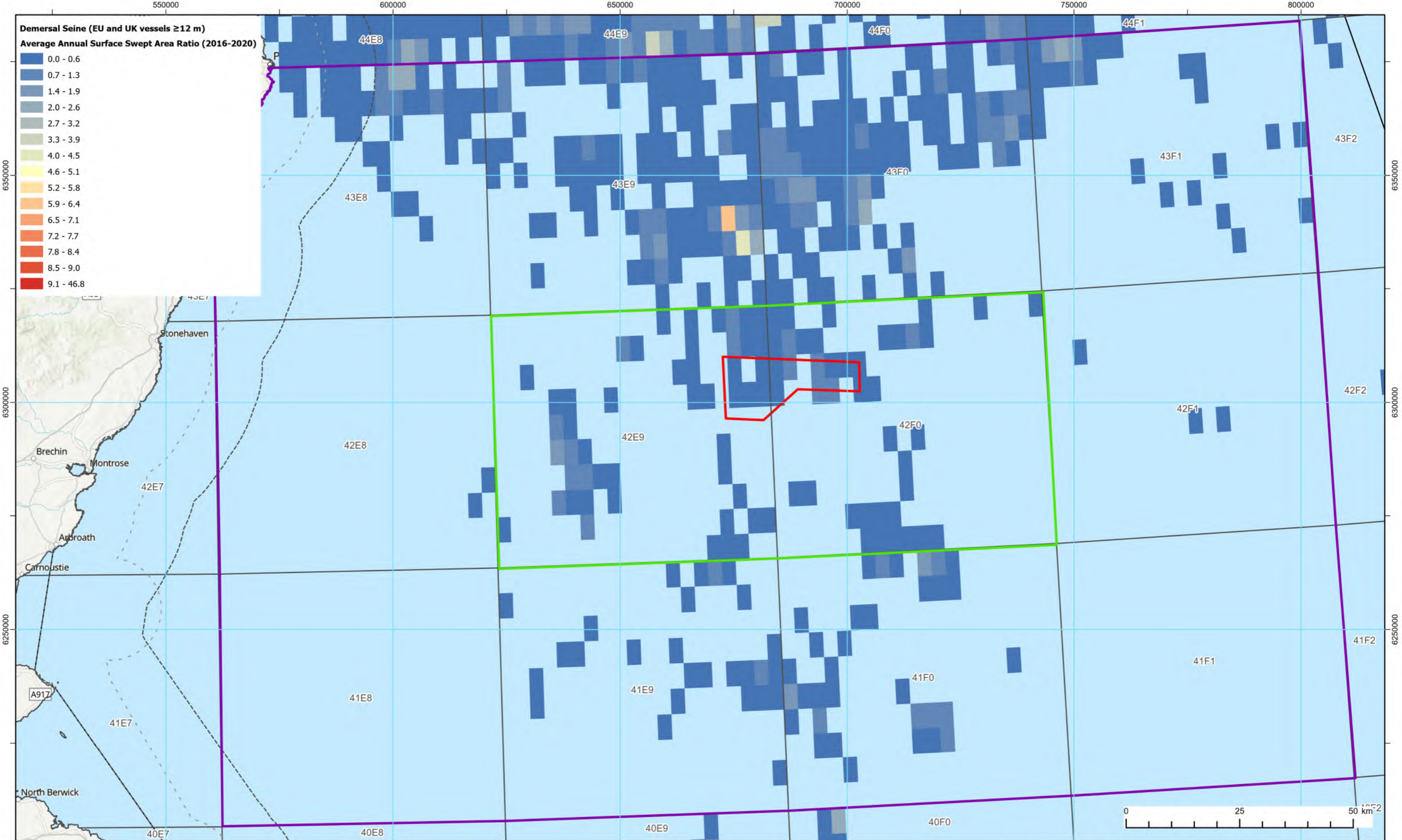
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Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
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Figure Title: **Demersal Seine Vessel Monitoring System Data for UK Vessels ≥ 15 m, 2016-2019**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

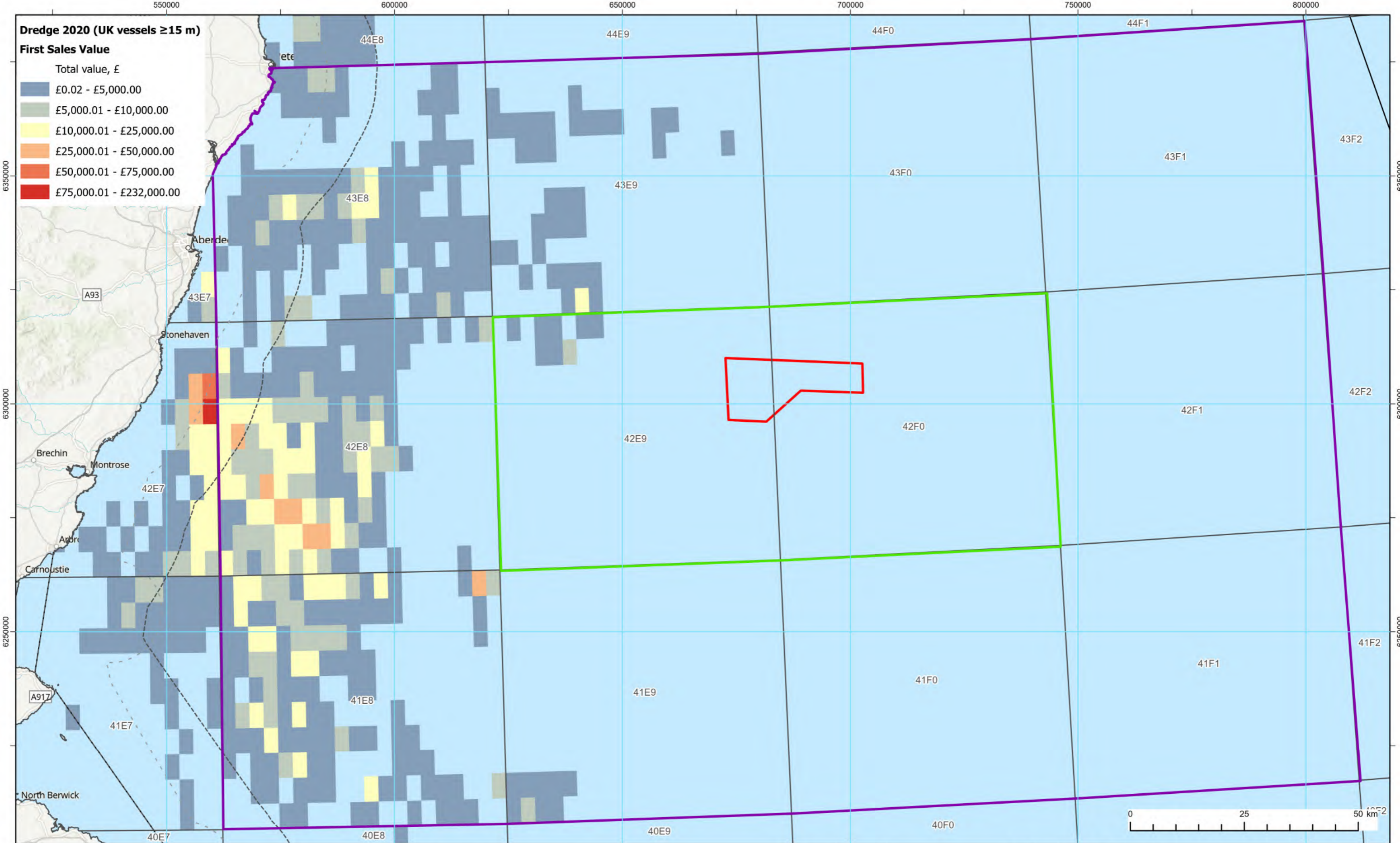
Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_095 **Figure 11.1.8**



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Figure Title: <b>Demersal Seine</b>					
<b>Average Annual Surface Swept Area Ratio For EU and UK Vessels ≥ 12 m, 2016-2020</b>					
Project: Bellrock Wind Farm Development Area (WFDA)			Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report		
Drawing No.: RHDV_BEL_CST_REP_0003_096				<b>Figure 11.1.9</b>	

Scale @ A3					
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**Dredge 2020 (UK vessels ≥15 m)**  
**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



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

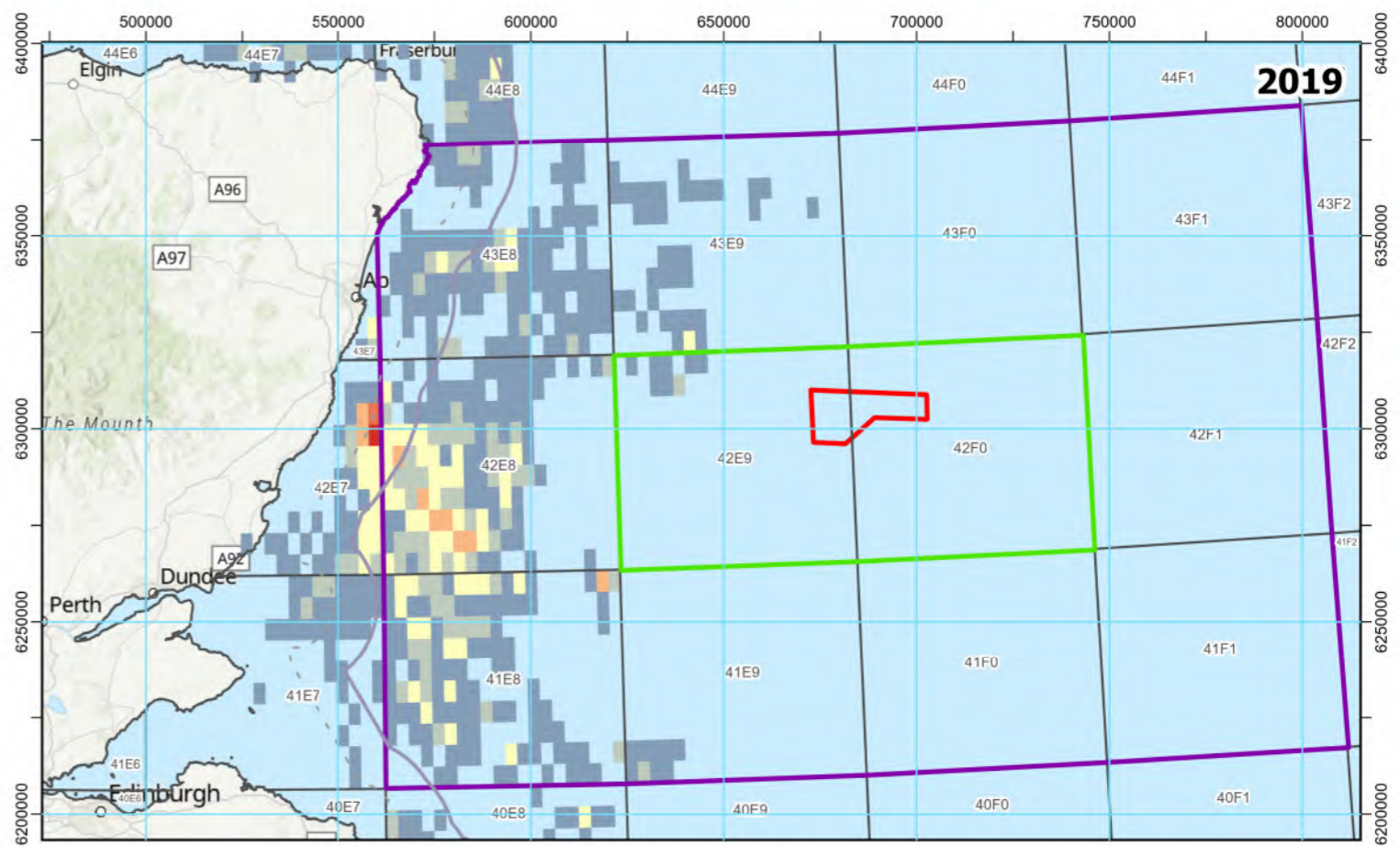
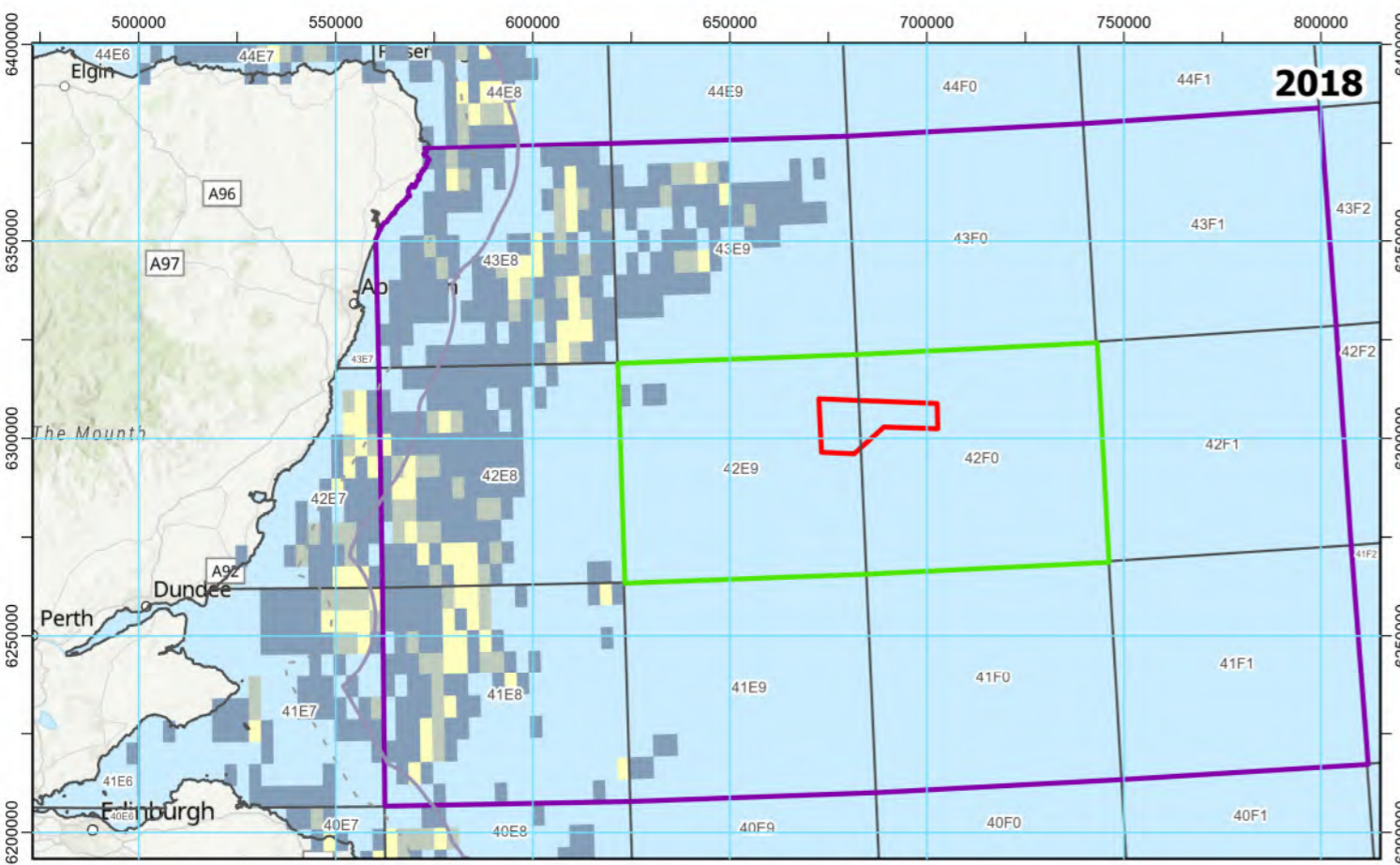
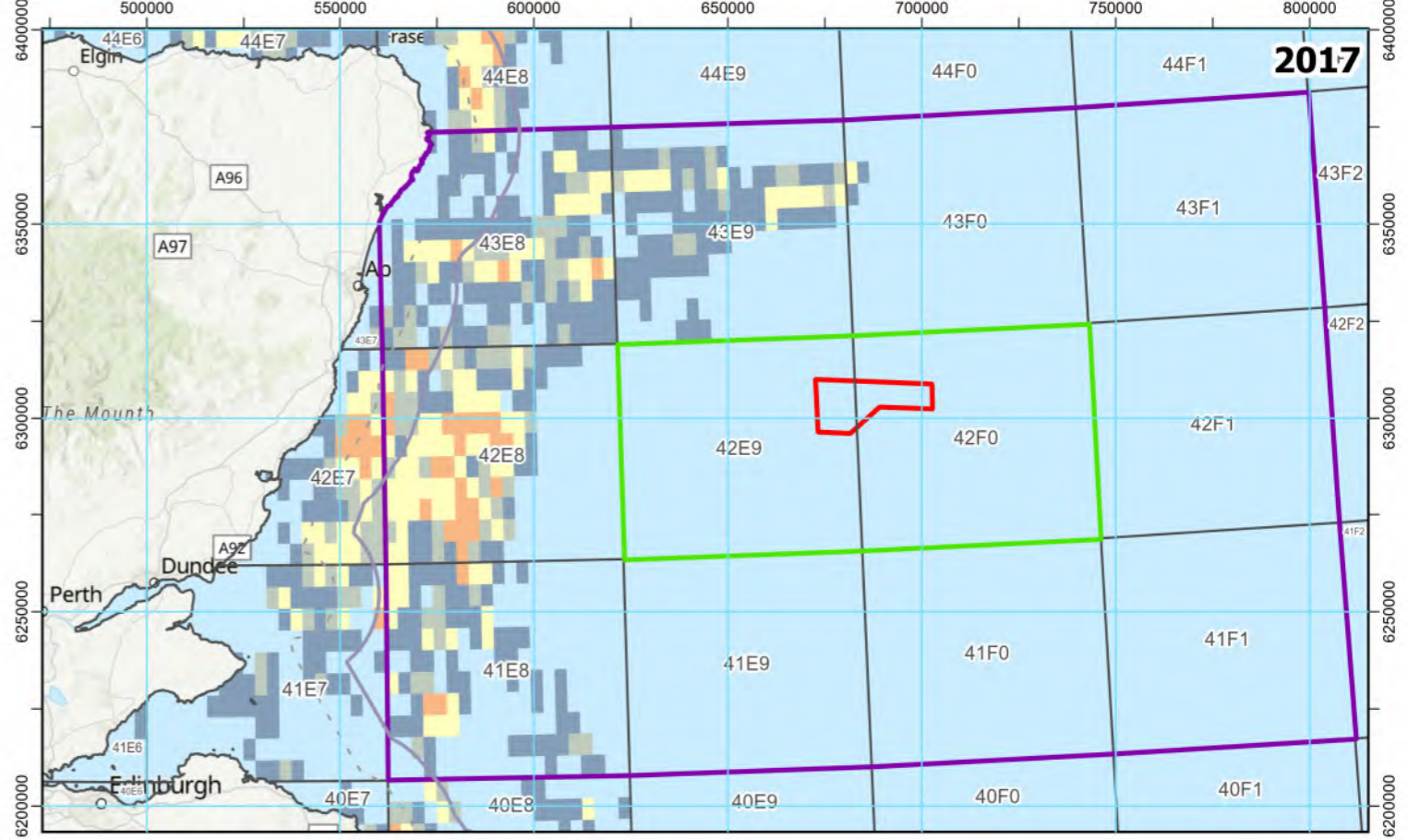
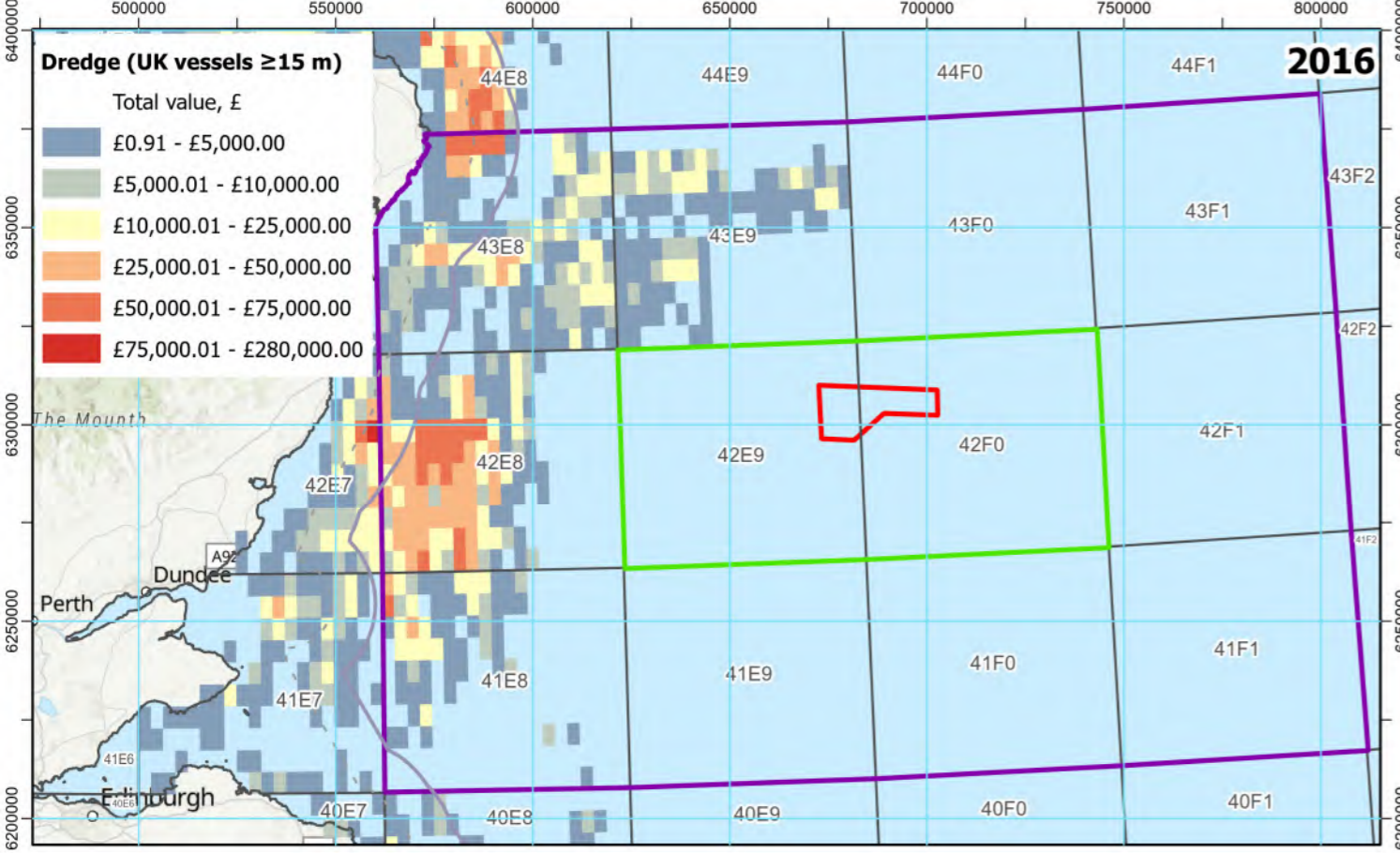
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Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

Figure Title: **Dredge Vessel Monitoring System Data for UK Vessels ≥ 15 m, 2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_097 **Figure 11.1.10**



**Legend:**

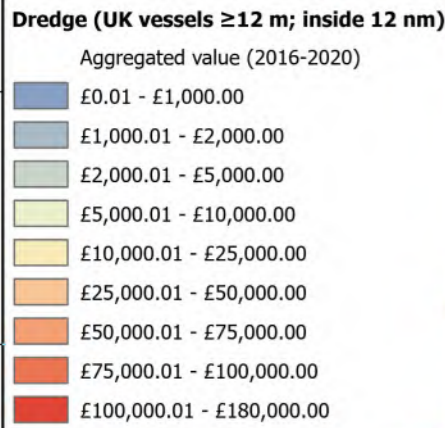
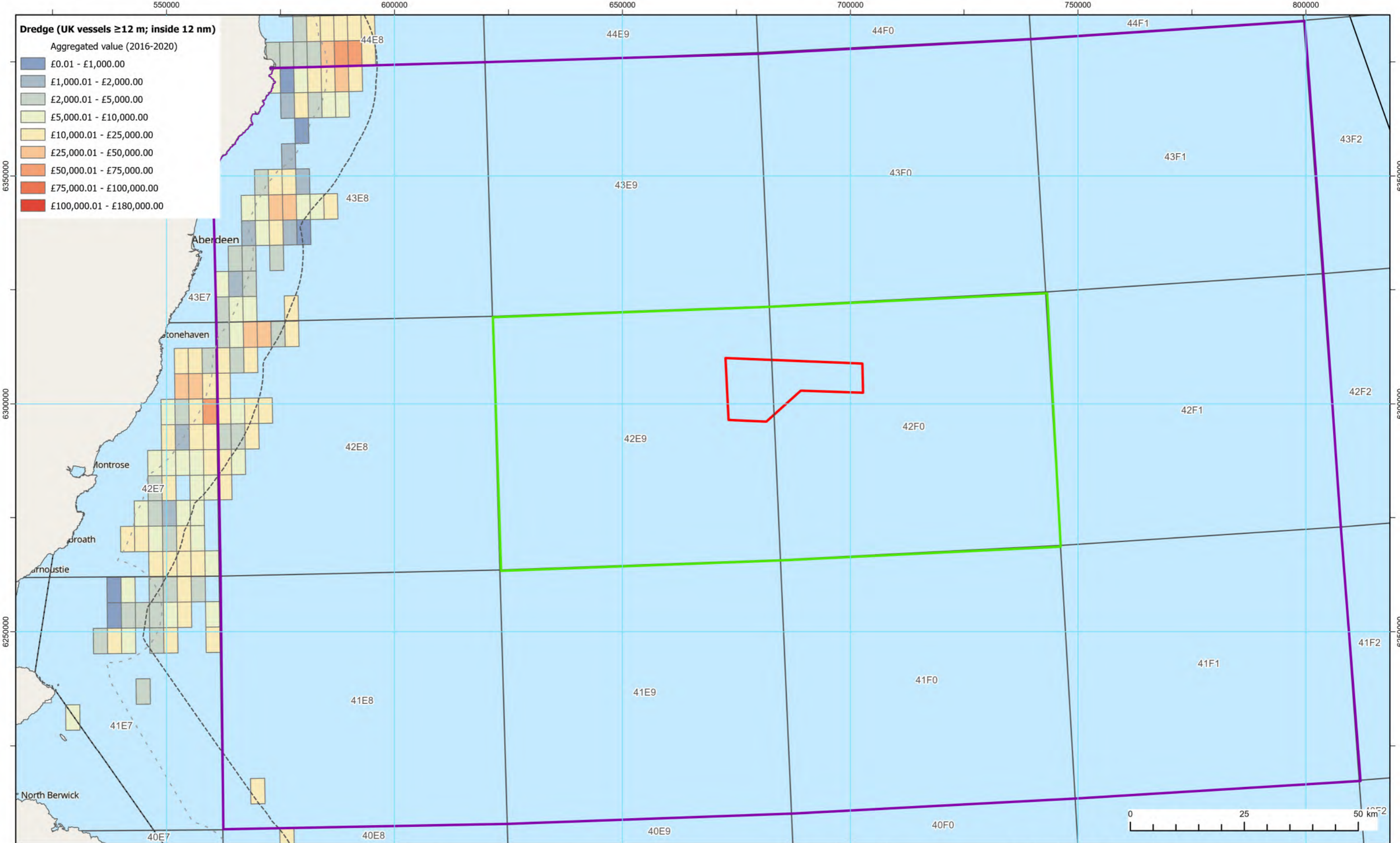
- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- - - 6 nm Limit
- 12 NM limit

1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3					
1:1,800,000					

**Figure Title:**  
**Dredge Vessel Monitoring System Data for UK Vessels ≥15 m, 2016-2019**

Project: Bellrock Wind Farm Development Area (WFDA) Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_098 **Figure 11.1.11**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

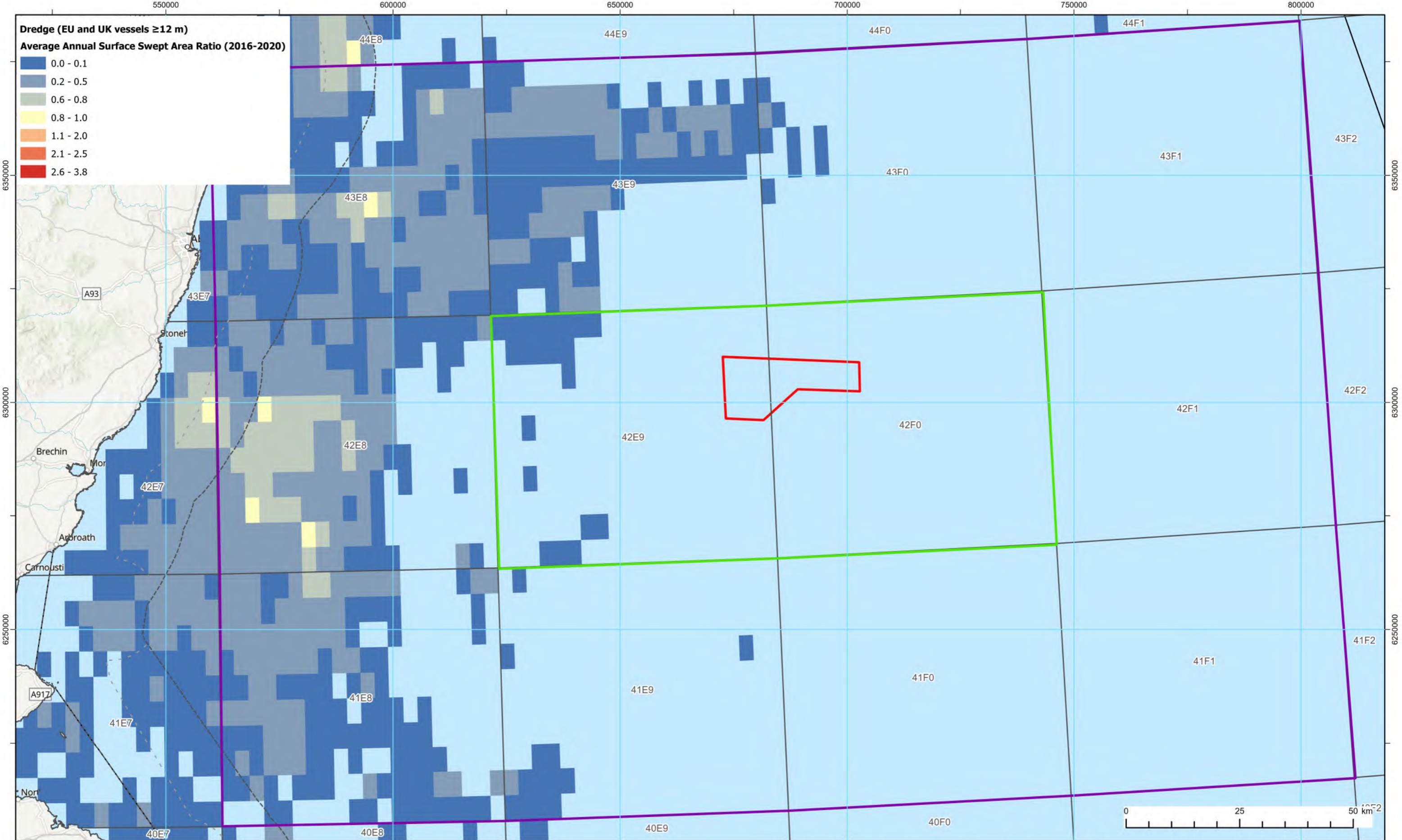
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Scale @ A3  
1:750,000

Figure Title:  
**Dredge  
UK Vessels  $\geq 12$  m, Inside 12 nm, 2016-2020**

Project: Bellrock Wind Farm Development Area (WFDA)  
Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_099 **Figure 11.1.12**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N

Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.

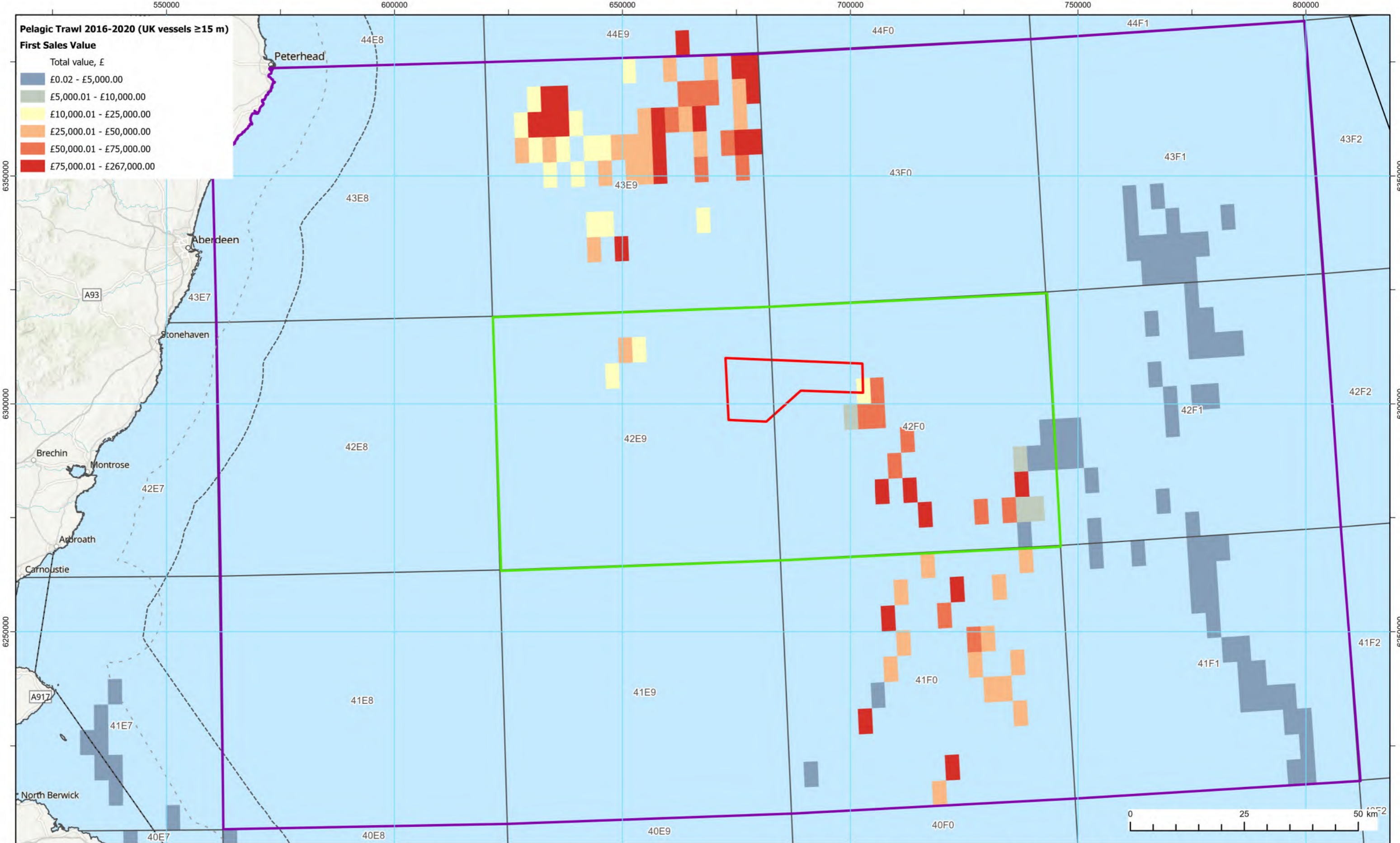
Scale @ A3  
1:750,000

Figure Title: **Dredge**  
**Average Annual Surface Swept Area Ratio For EU and UK Vessels ≥12 m, 2016-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report  
Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_100 **Figure 11.1.13**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N

Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.

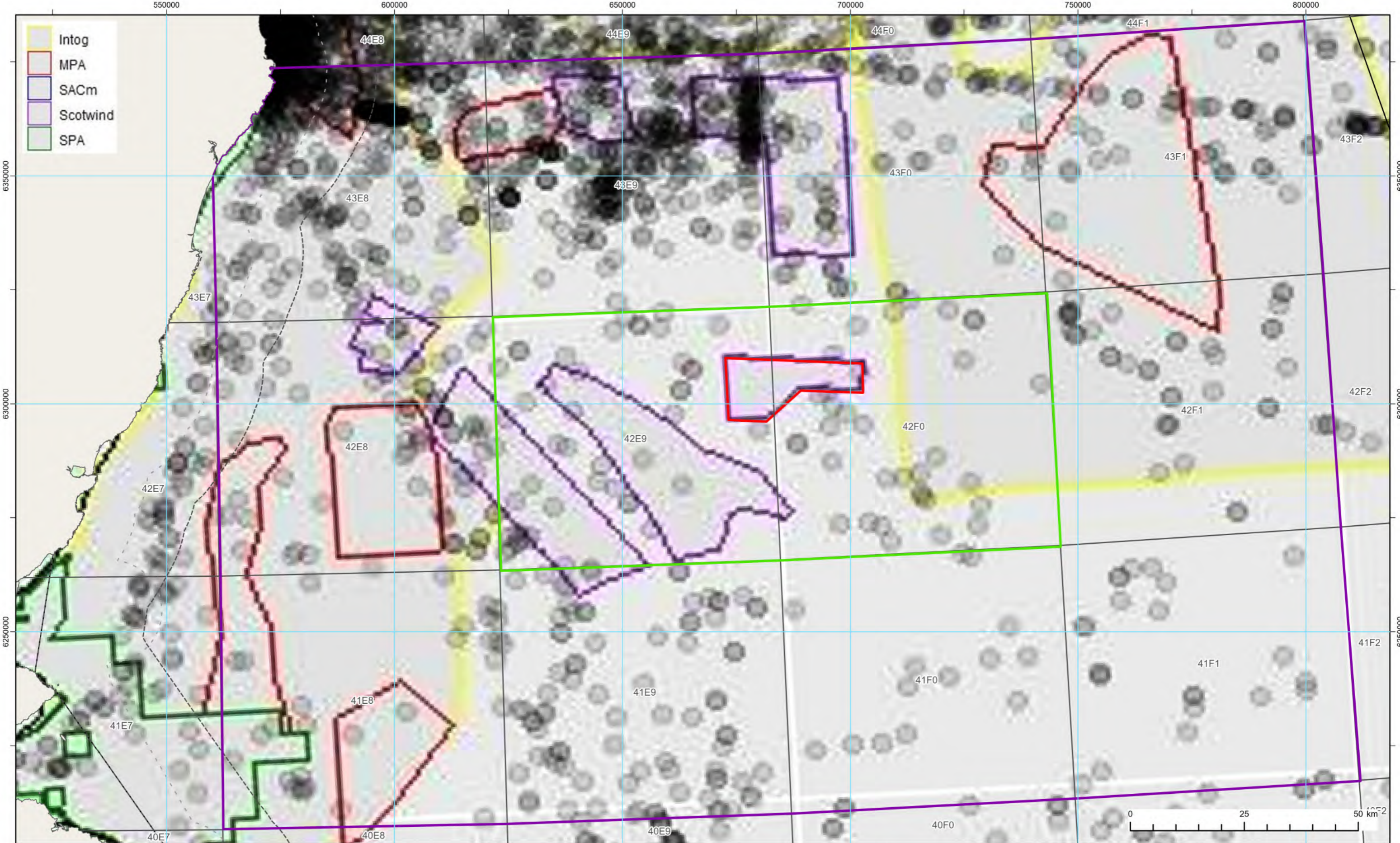
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Figure Title: **Pelagic Trawl Vessel Monitoring System Data for UK Vessels ≥ 15 m, 2016-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_101 **Figure 11.1.14**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit
- Pelagic VMS record

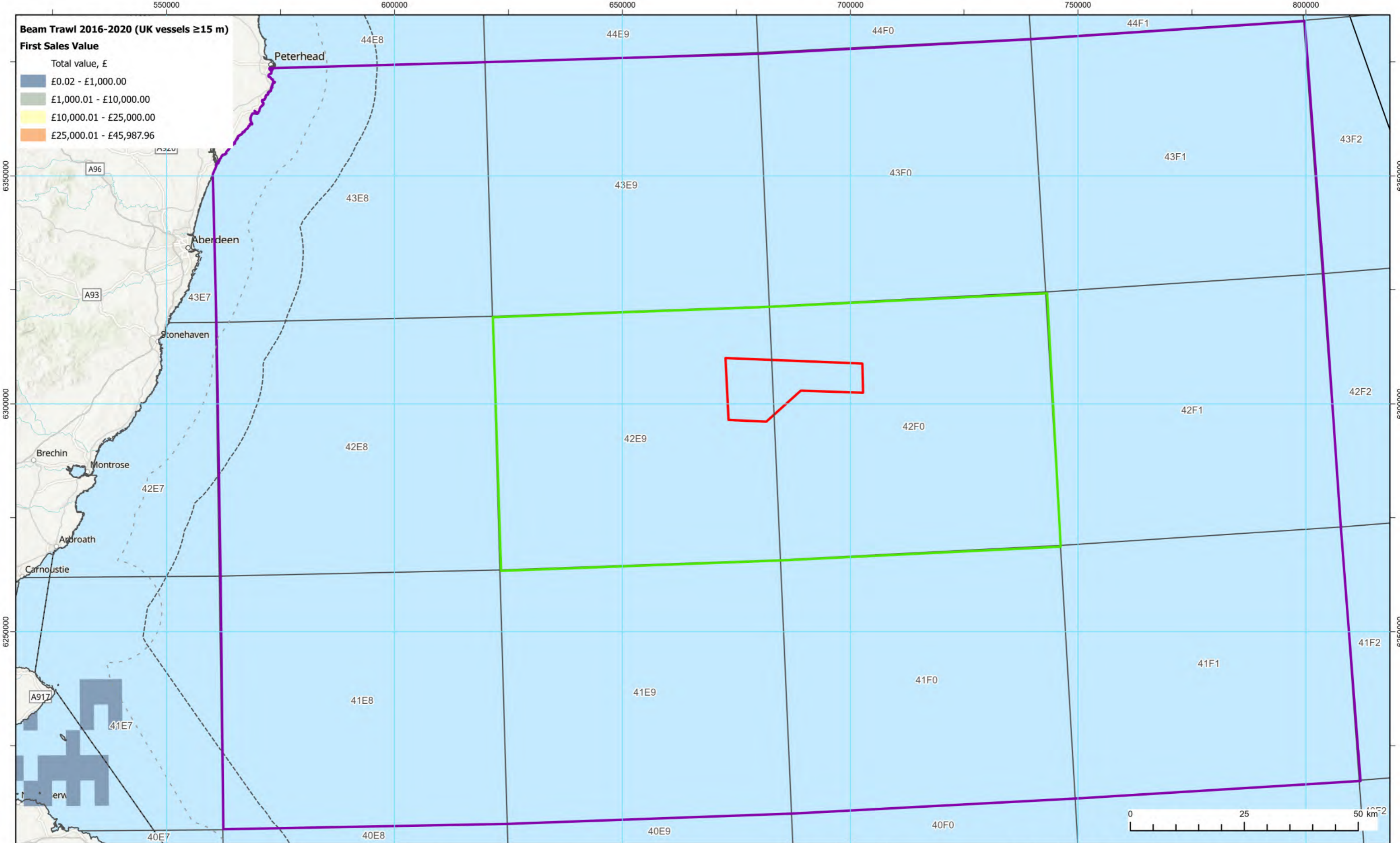
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			Scale @ A3		
			1:750,000		

Figure Title:  
**Scottish Pelagic Trawl VMS Data  
Active Fishing and Transit, 2013-2021**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report  
Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_102 **Figure 11.1.15**



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

**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N  
 Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.

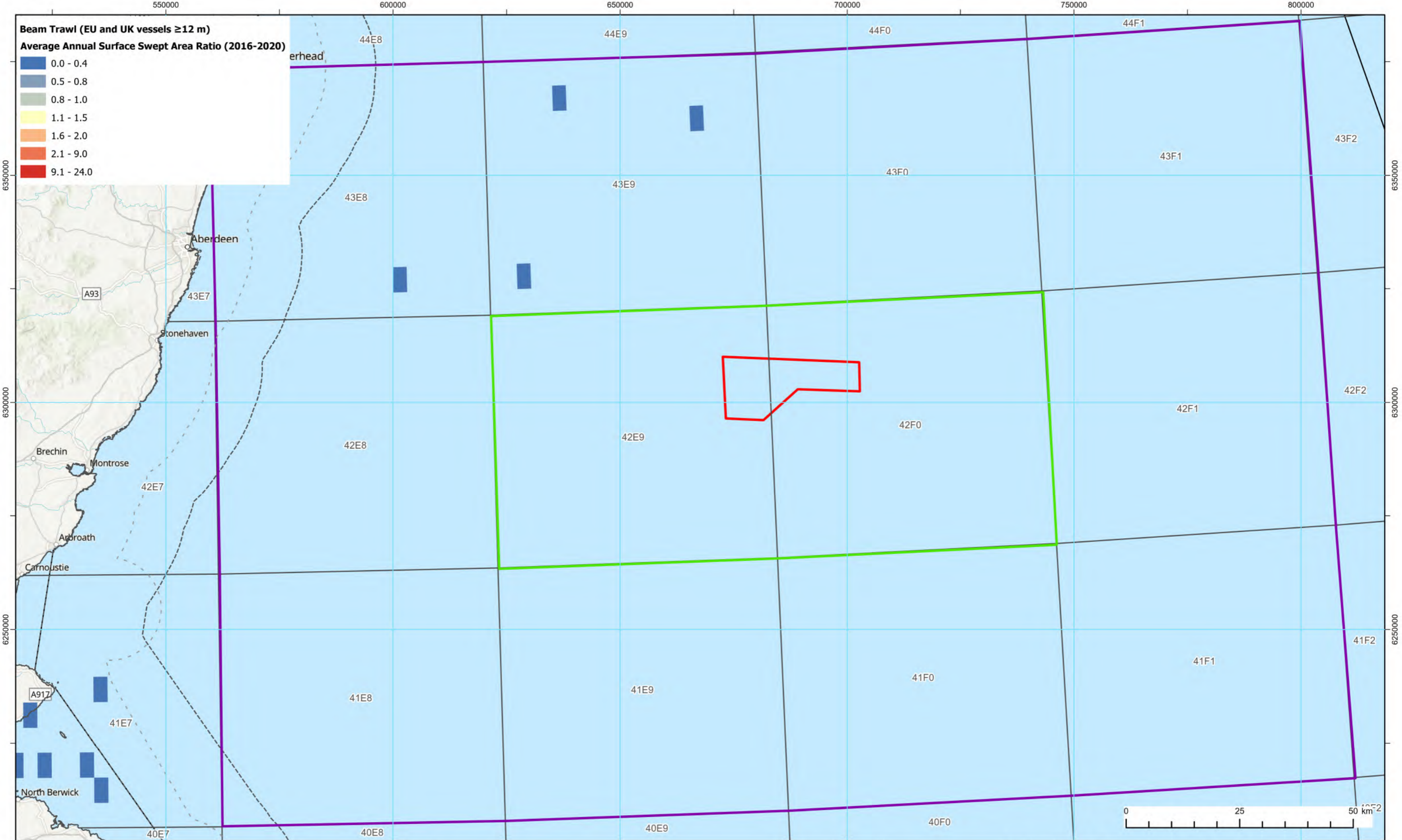
Scale @ A3  
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Figure Title: **Beam Trawl Vessel Monitoring System Data for UK Vessels ≥15 m, 2016-2020**

Project: Bellrock Wind Farm Development Area (WFDA) Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_103 **Figure 11.1.16**





**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N  
 Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.

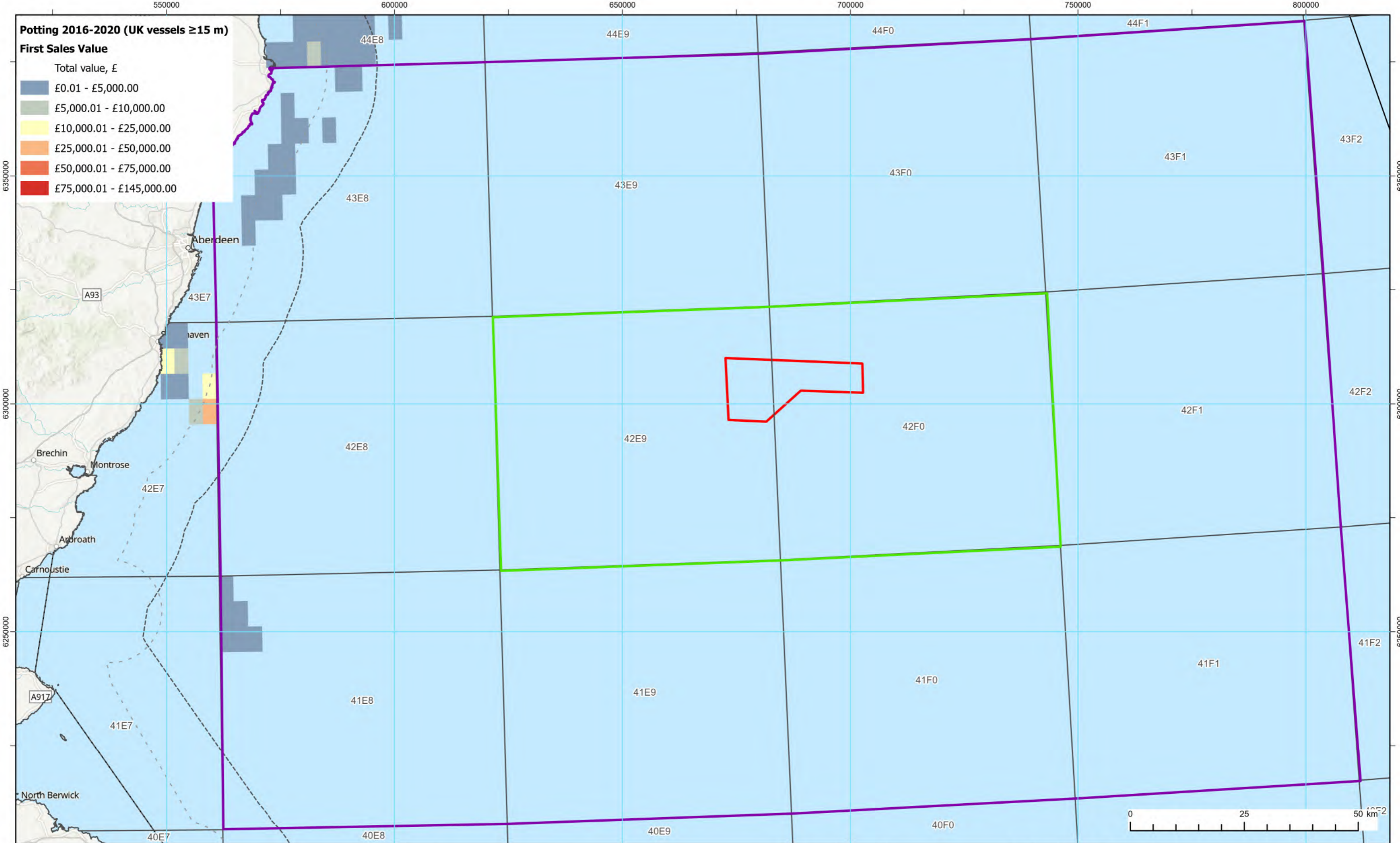
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Figure Title: **Beam Trawl Average Annual Surface Swept Area Ratio For EU and UK Vessels ≥12 m, 2016-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_104 **Figure 11.1.17**



**Potting 2016-2020 (UK vessels ≥15 m)**  
**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



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

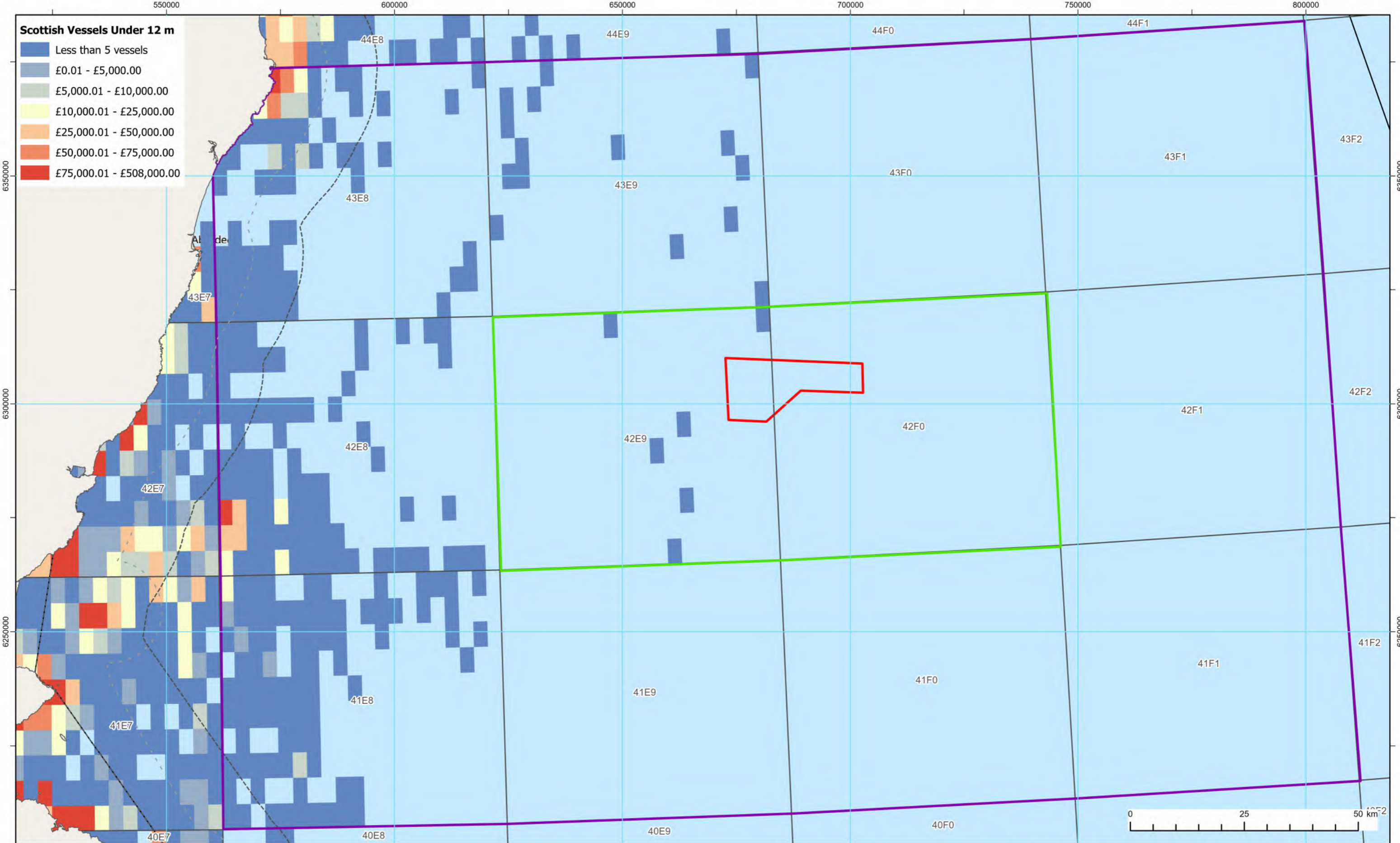
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REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
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Scale @ A3			1:750,000		

Figure Title: **Potting Vessel Monitoring System Data for UK Vessels ≥15 m, 2016-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_105 **Figure 11.1.18**



**Scottish Vessels Under 12 m**

- Less than 5 vessels
- £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 - £508,000.00

**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N

Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.

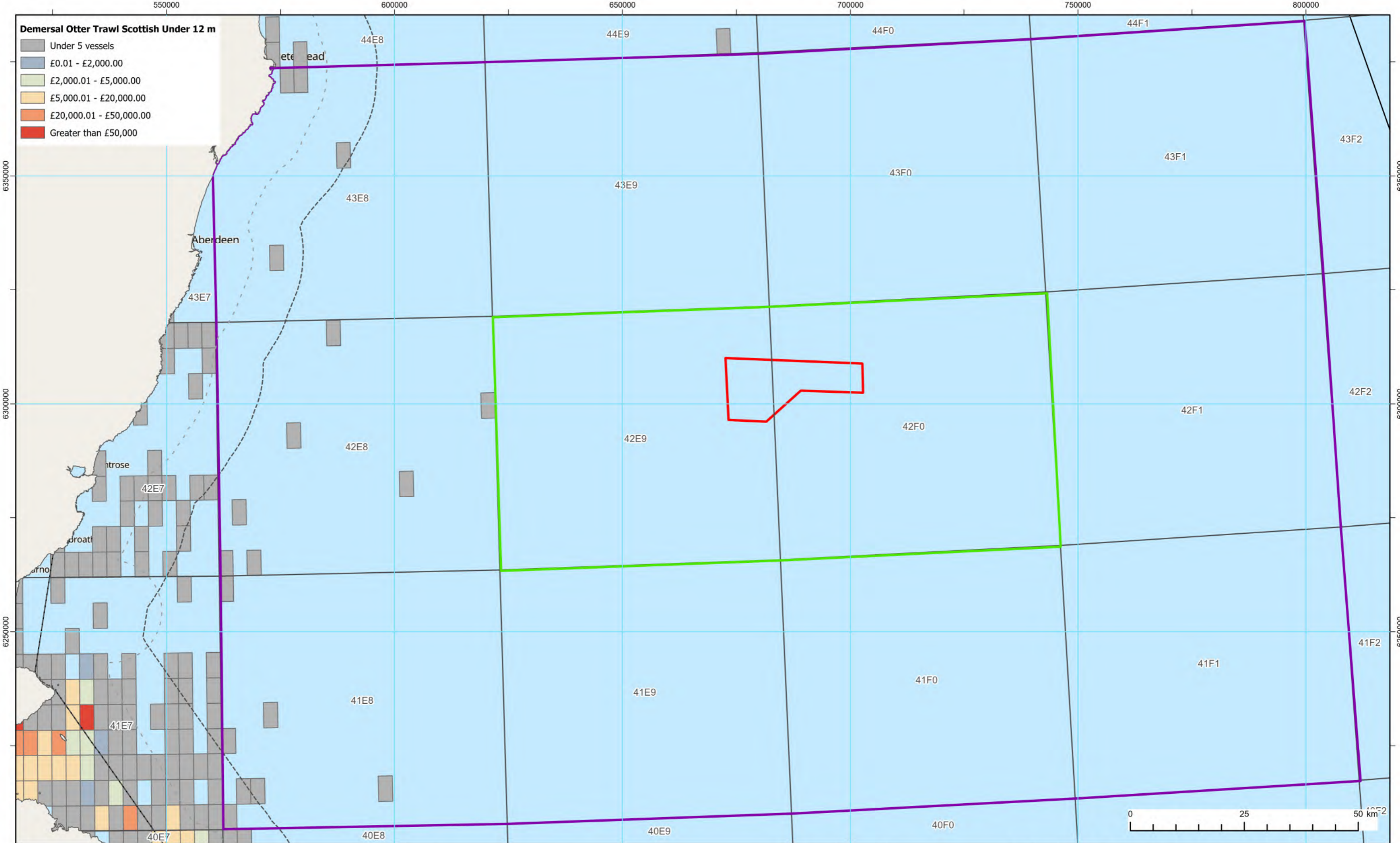
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Figure Title:  
**All Gears Average Annual Value  
Scottish Vessels Under 12 m, 2017-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report  
Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_106 **Figure 11.1.19**



**Demersal Otter Trawl Scottish Under 12 m**

- 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



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

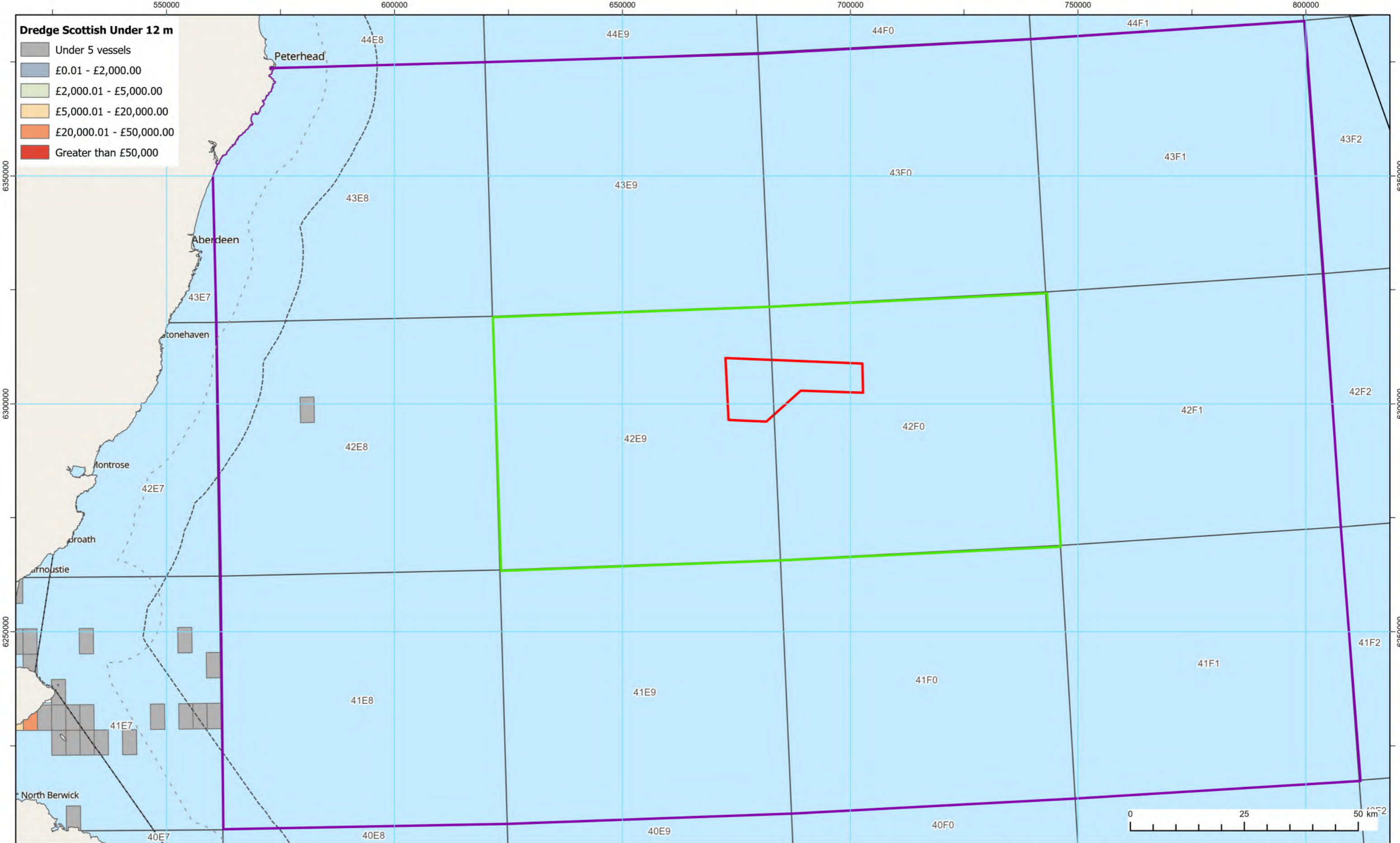
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Scale @ A3			1:750,000		

Figure Title:  
**Demersal Otter Trawl Average Annual Value Scottish Vessels Under 12 m, 2017-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_107 **Figure 11.1.20**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

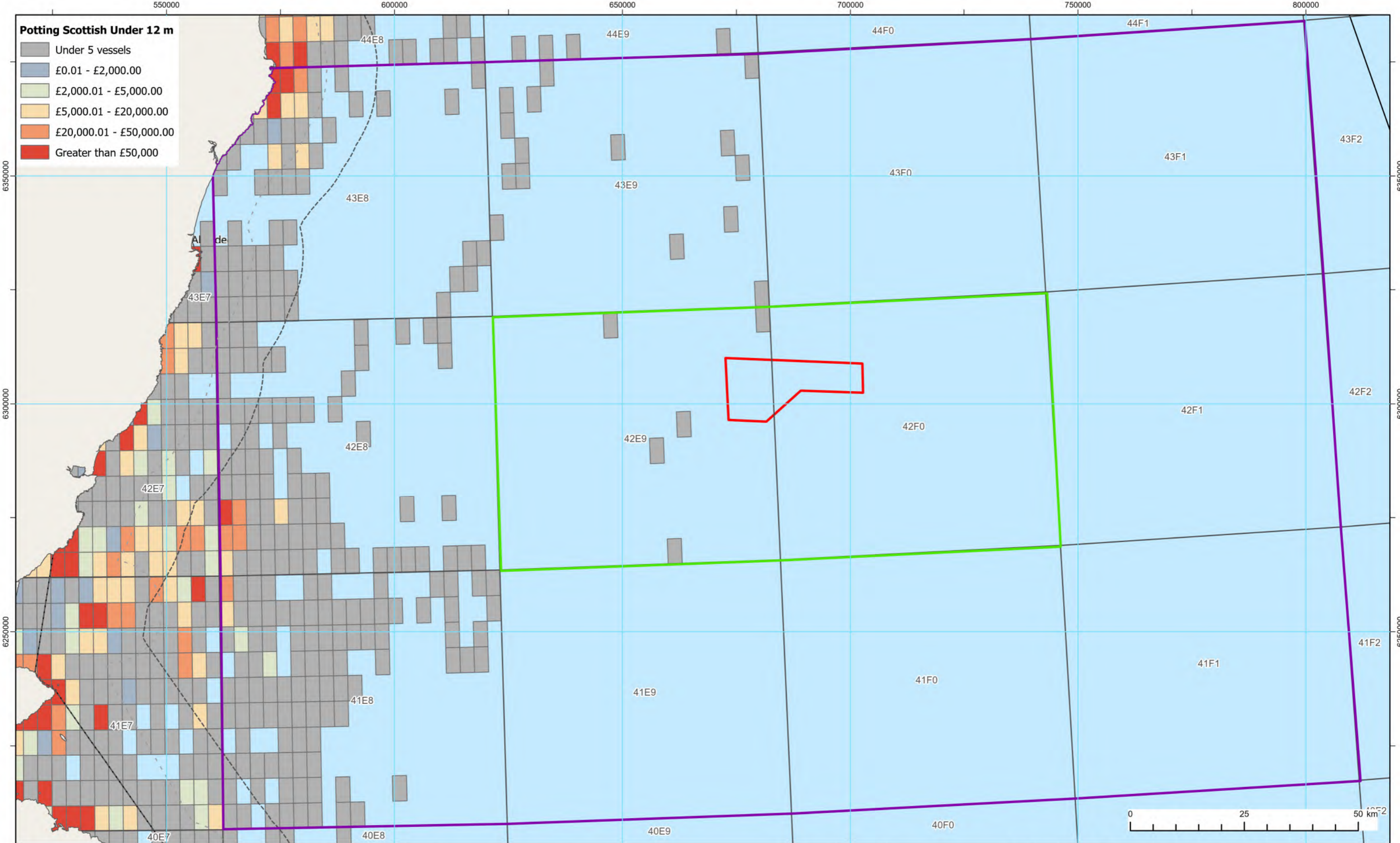
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			Scale @ A3		
			1:750,000		

Figure Title:  
**Dredge Average Annual Value  
 Scottish Vessels Under 12 m, 2017-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report  
 Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_108 **Figure 11.1.21**



**Potting Scottish Under 12 m**

- 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



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
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Coordinate System: WGS 1984 UTM Zone 30N

Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.

Scale @ A3  
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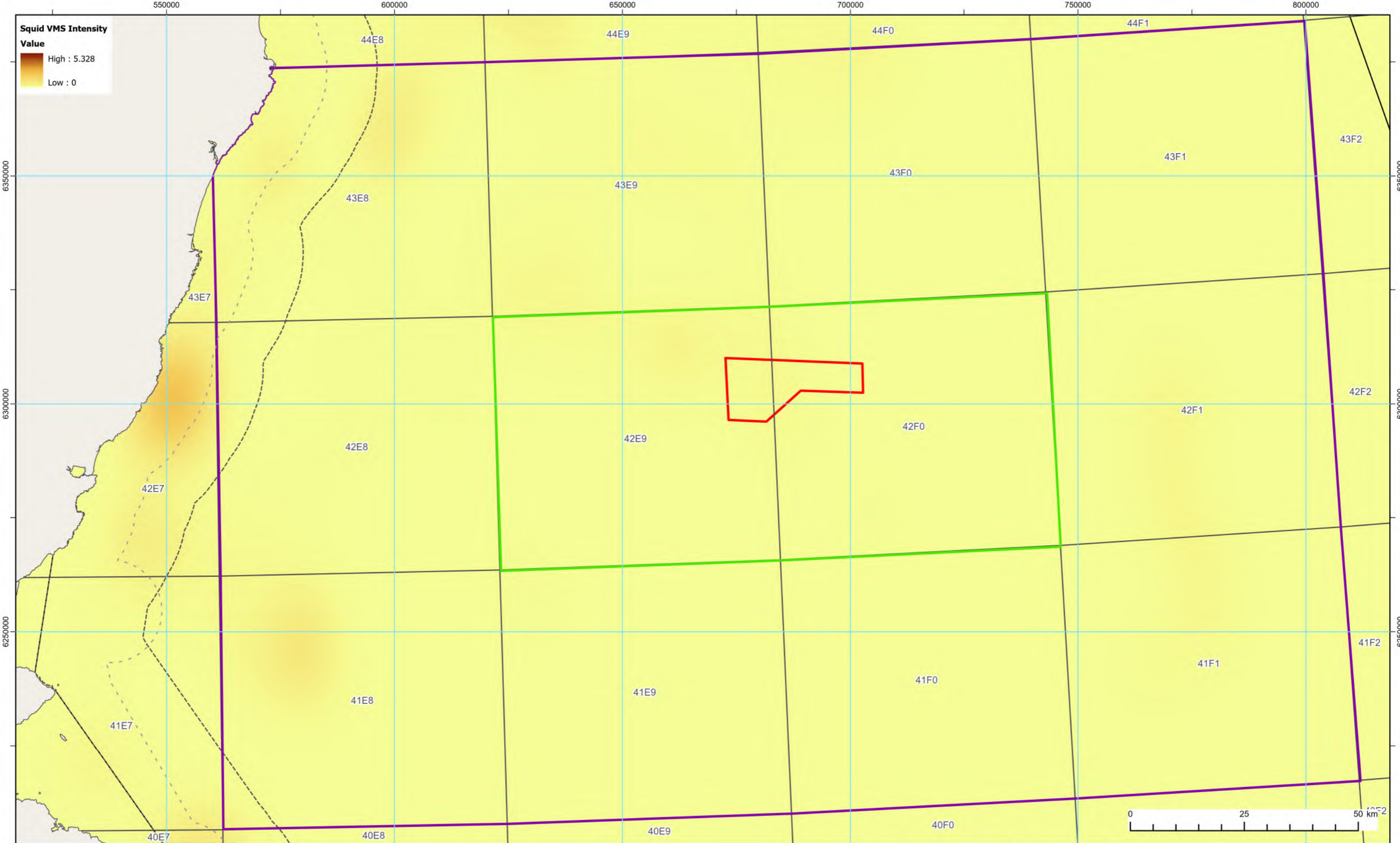
Figure Title:  
**Potting Average Annual Value  
Scottish Vessels Under 12 m, 2017-2020**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report  
Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_109 **Figure 11.1.22**





**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N

Source:  
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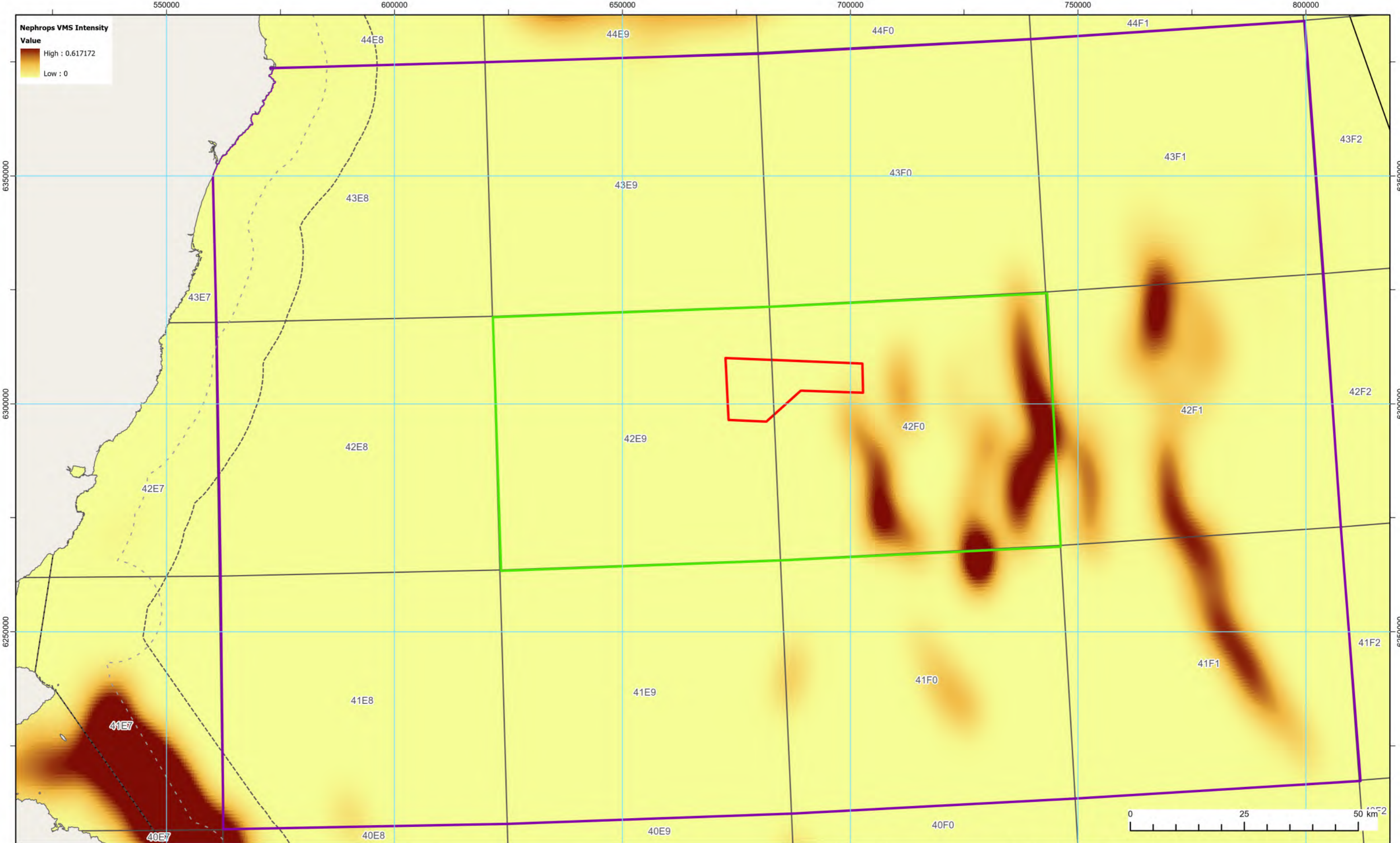
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Figure Title:  
**Squid Fishery Amalgamated VMS Intensity, 2009-2013**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_111 **Figure 11.1.24**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

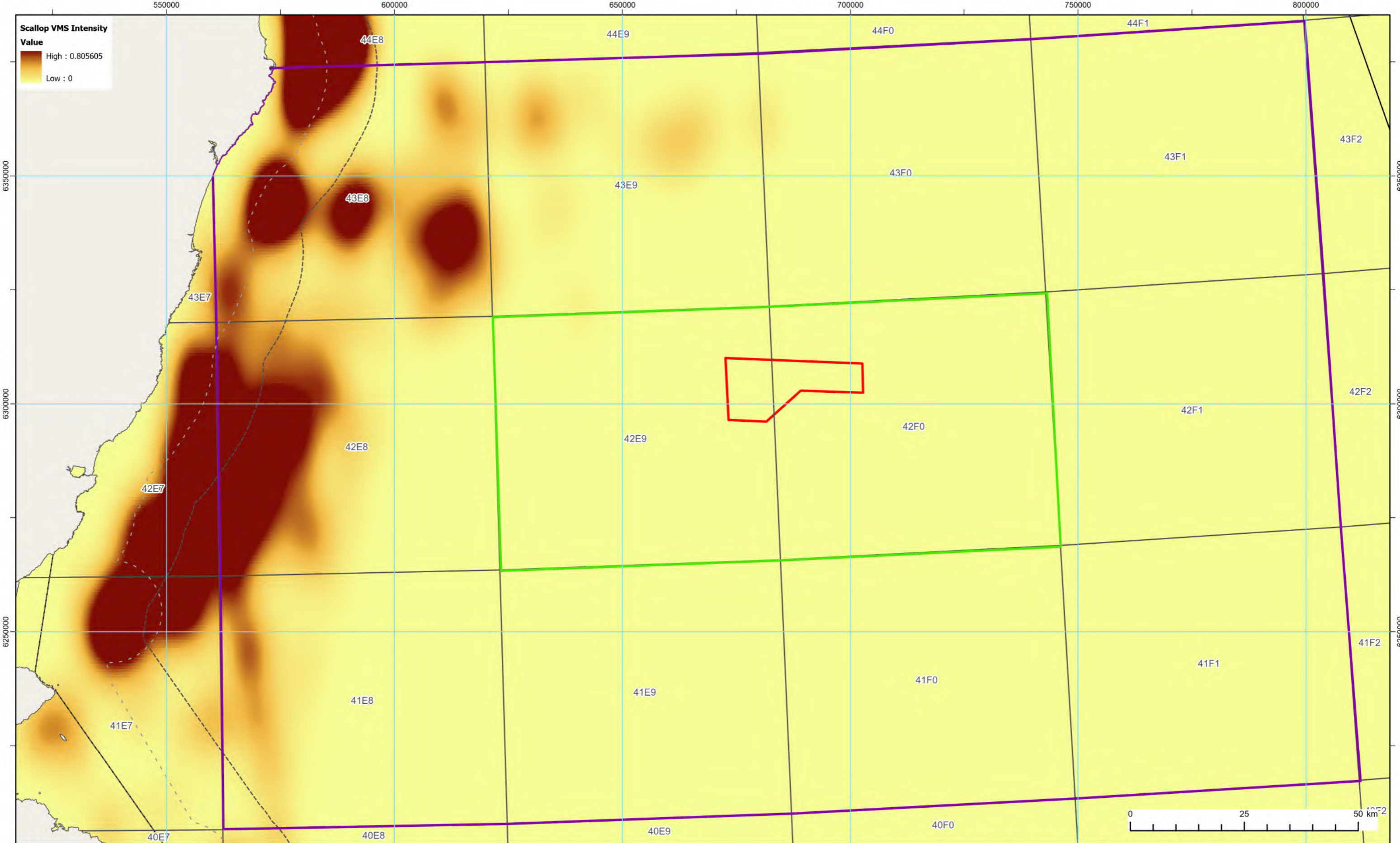
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Scale @ A3			1:750,000		

**Figure Title:**  
**Nephrops Fishery Amalgamated VMS Intensity, 2009-2013**

**Project:** Bellrock Wind Farm Development Area (WFDA)

**Report:** EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

**Drawing No.:** RHDV\_BEL\_CST\_REP\_0003\_112 **Figure 11.1.25**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

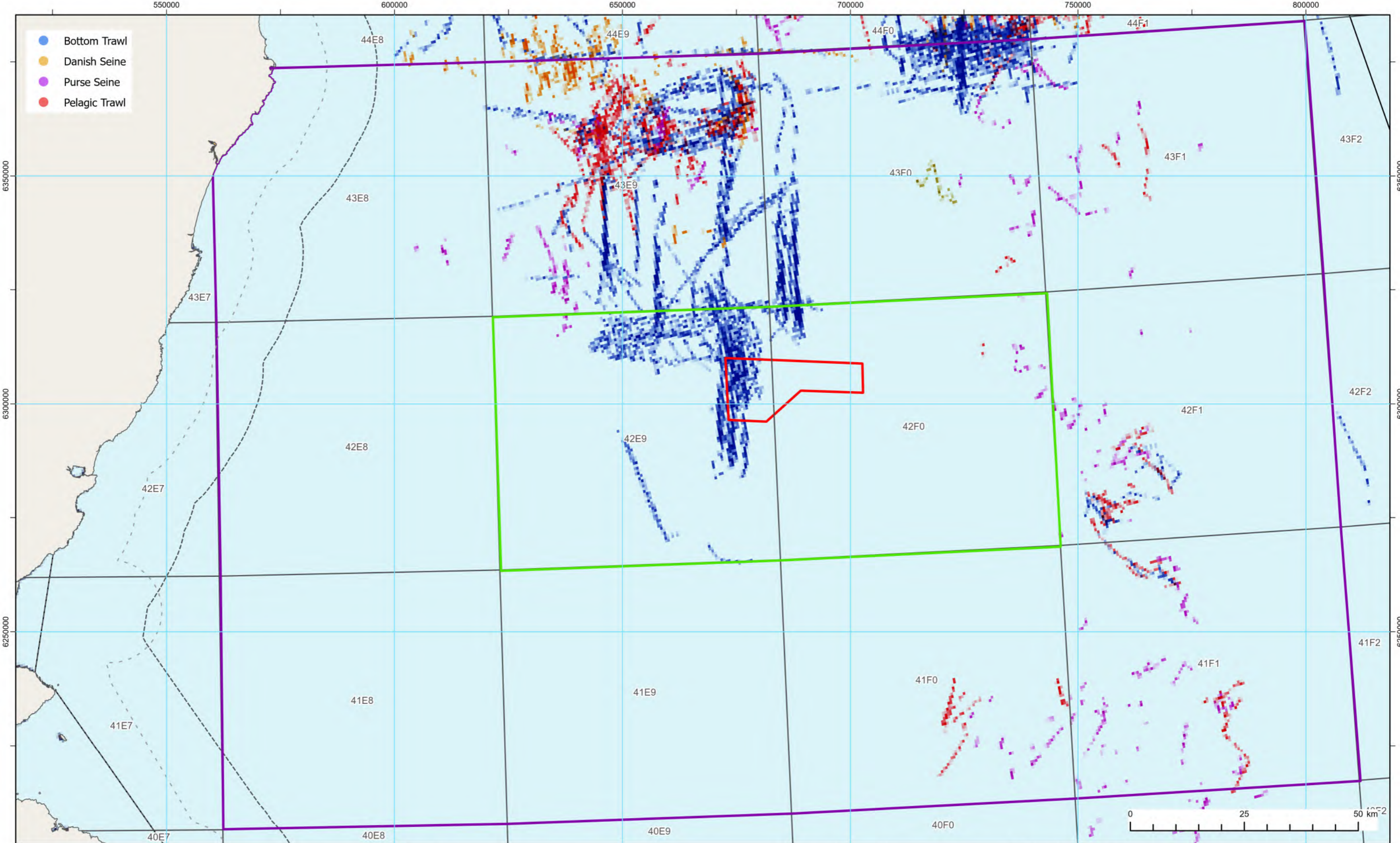
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Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
			Scale @ A3 1:750,000		

Figure Title:  
**Scallop Fishery Amalgamated VMS Intensity, 2009-2013**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_113 **Figure 11.1.26**



- Bottom Trawl
- Danish Seine
- Purse Seine
- Pelagic Trawl

- Legend:**
- Bellrock Wind Farm Development Area
  - Commercial Fisheries Local Study Area
  - Commercial Fisheries Regional Study Area
  - International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
  - 12 nm Limit
  - 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N

Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.

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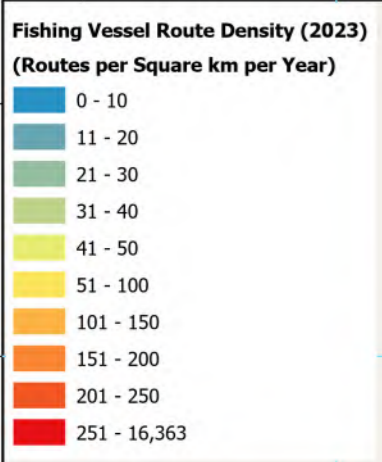
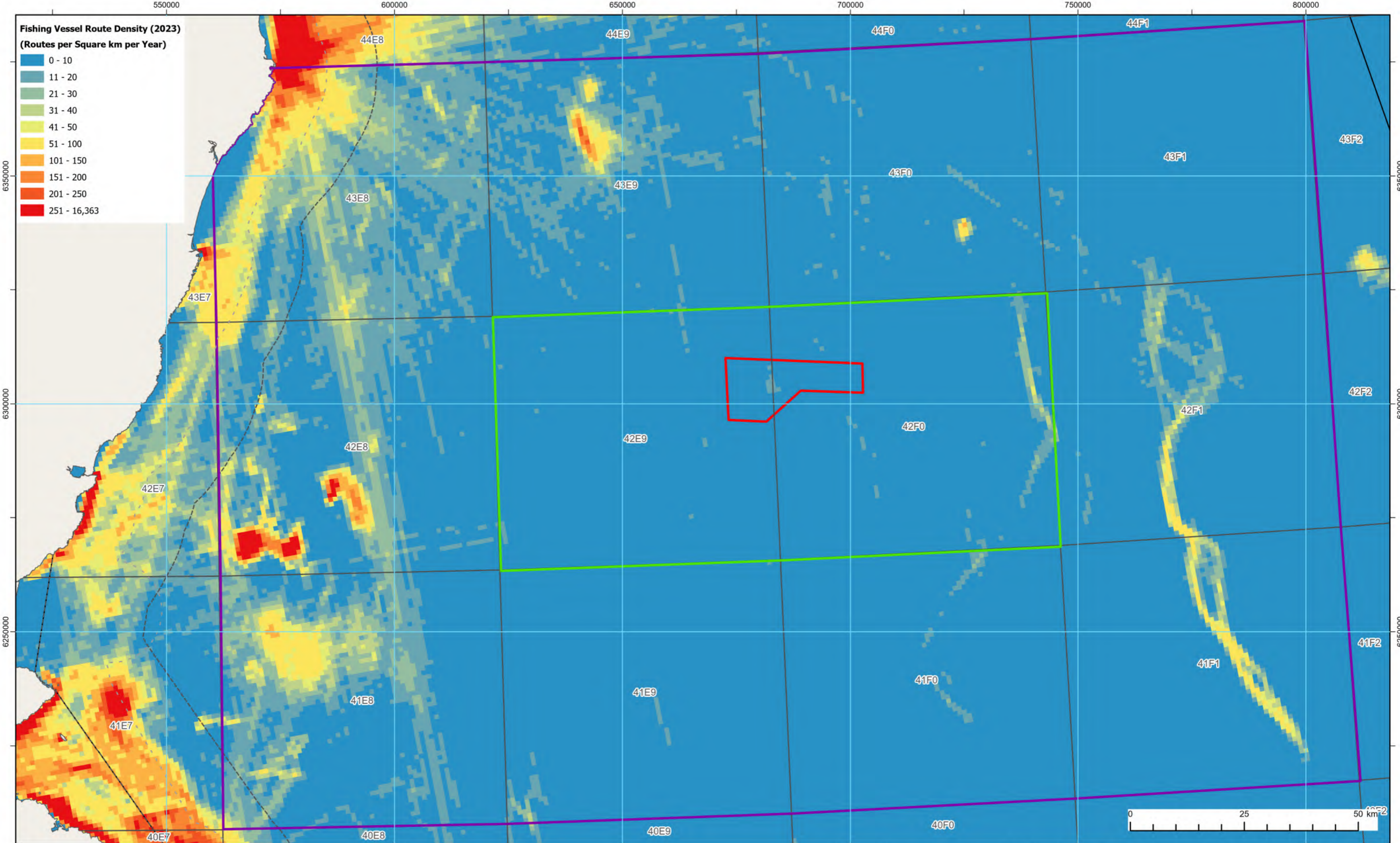
Figure Title:  
**Norwegian VMS Data  
By Gear Type, 2011-2023**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report  
Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_114 **Figure 11.1.27**

UNITED KINGDOM



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

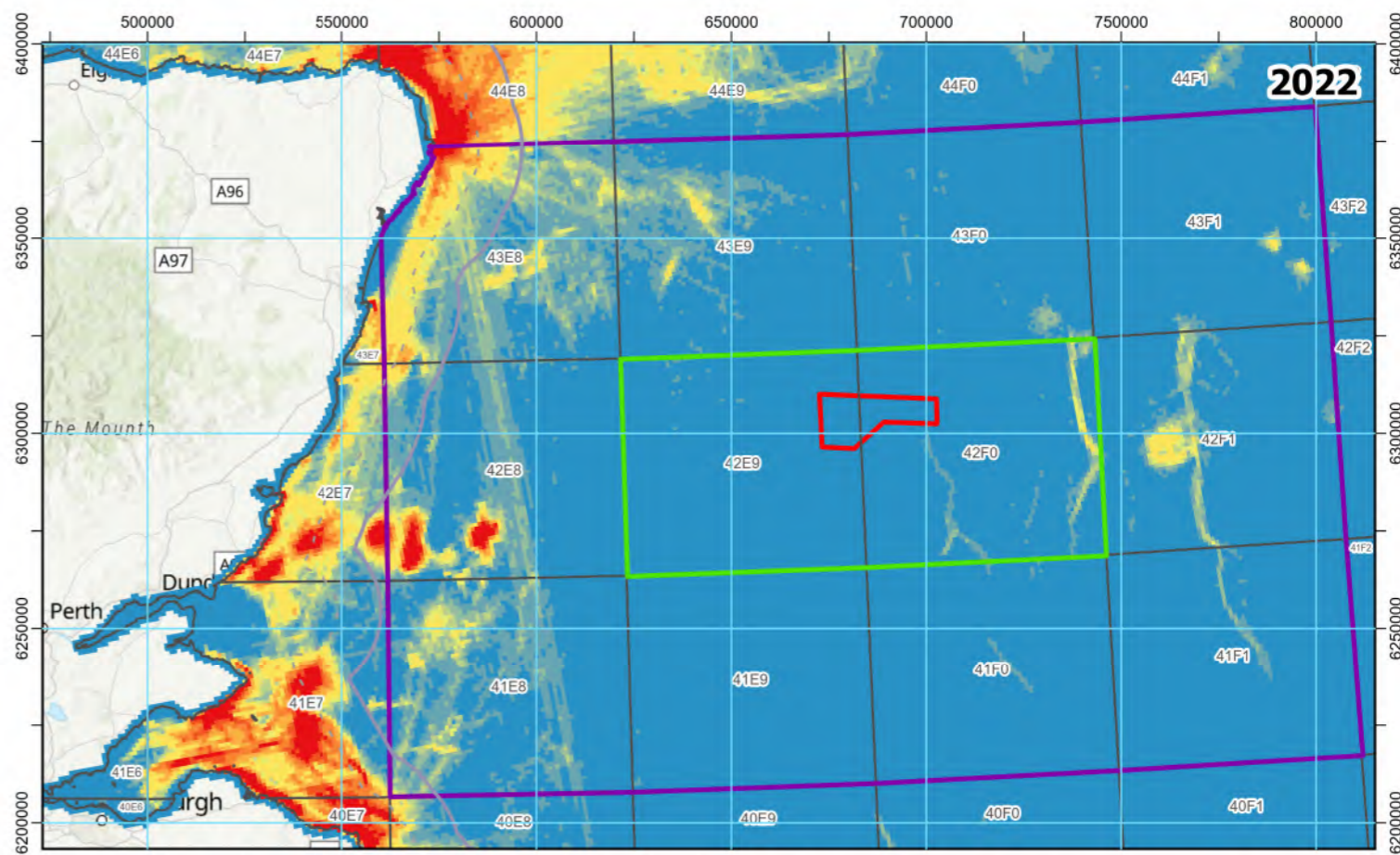
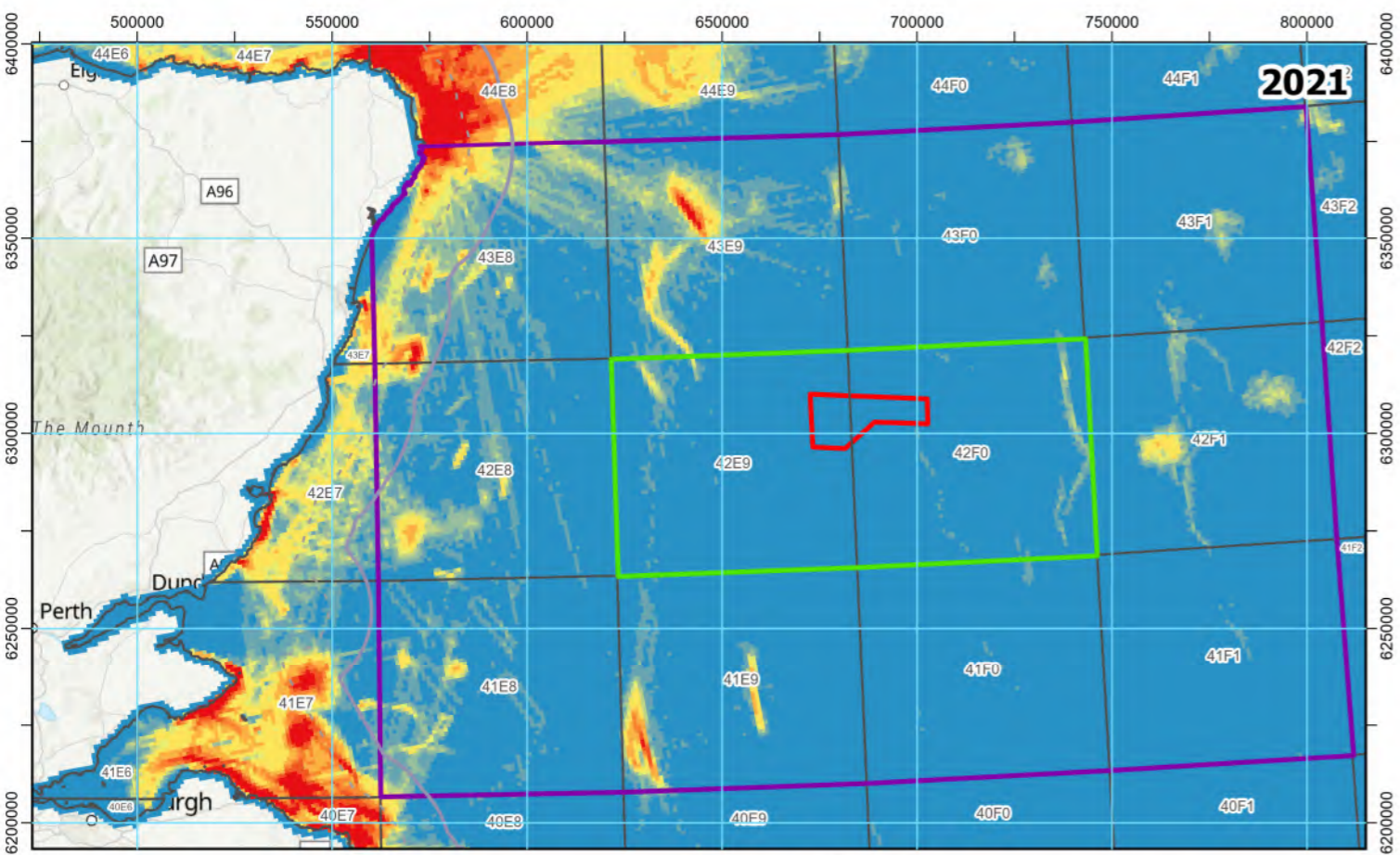
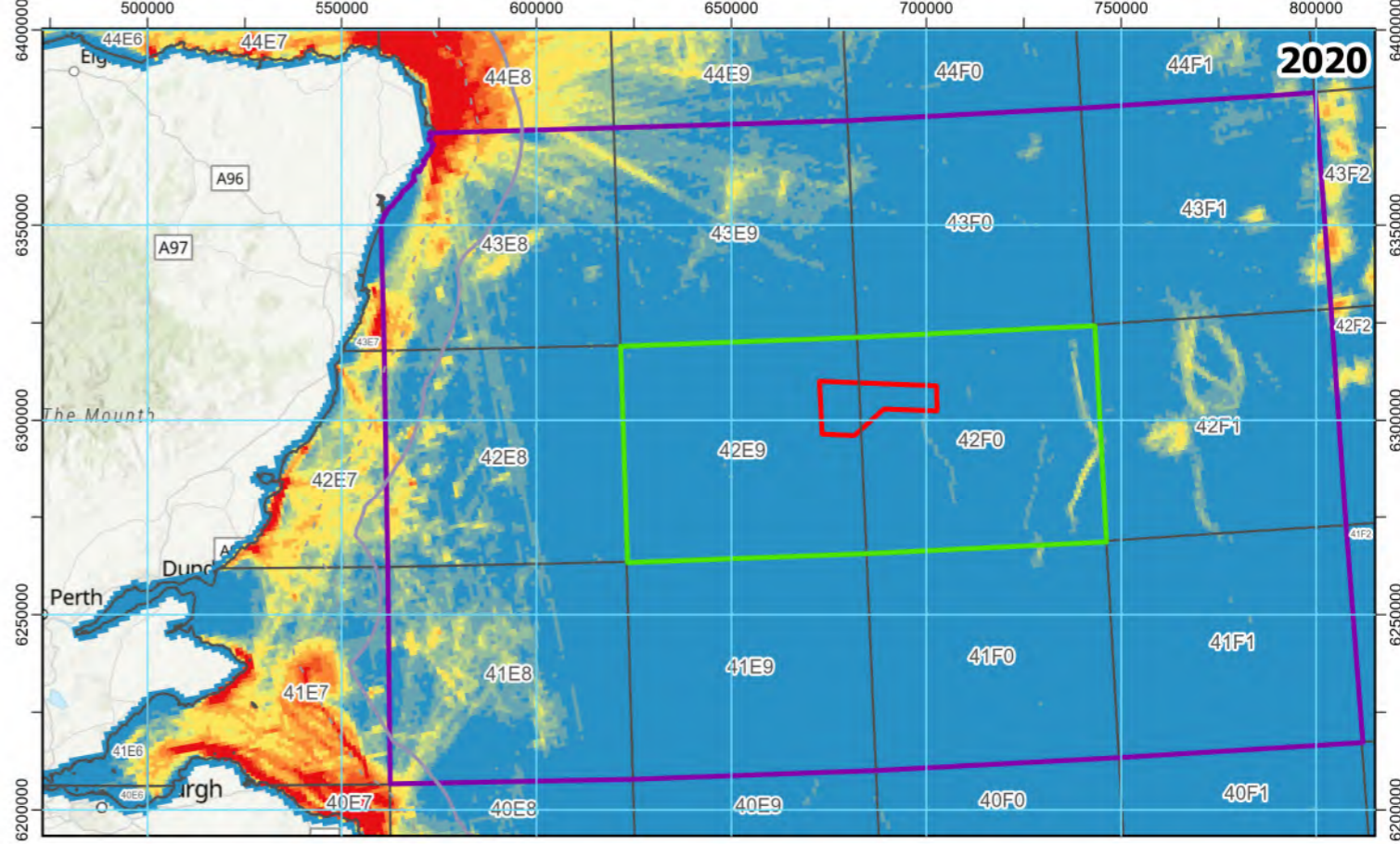
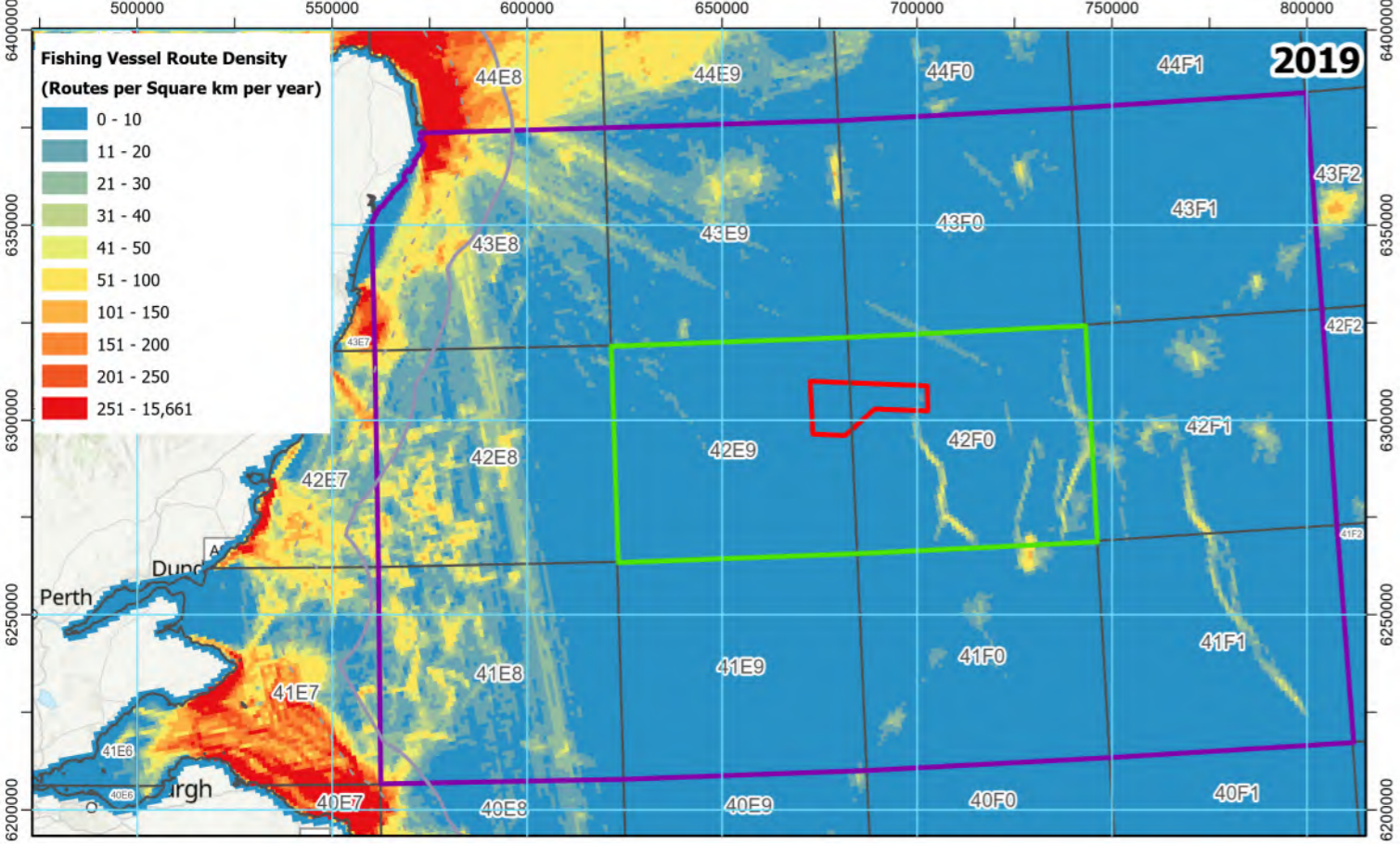
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Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

Figure Title: **Automatic Identification System Data Fishing Vessel Route Density Routes per Square km per Year (2023)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

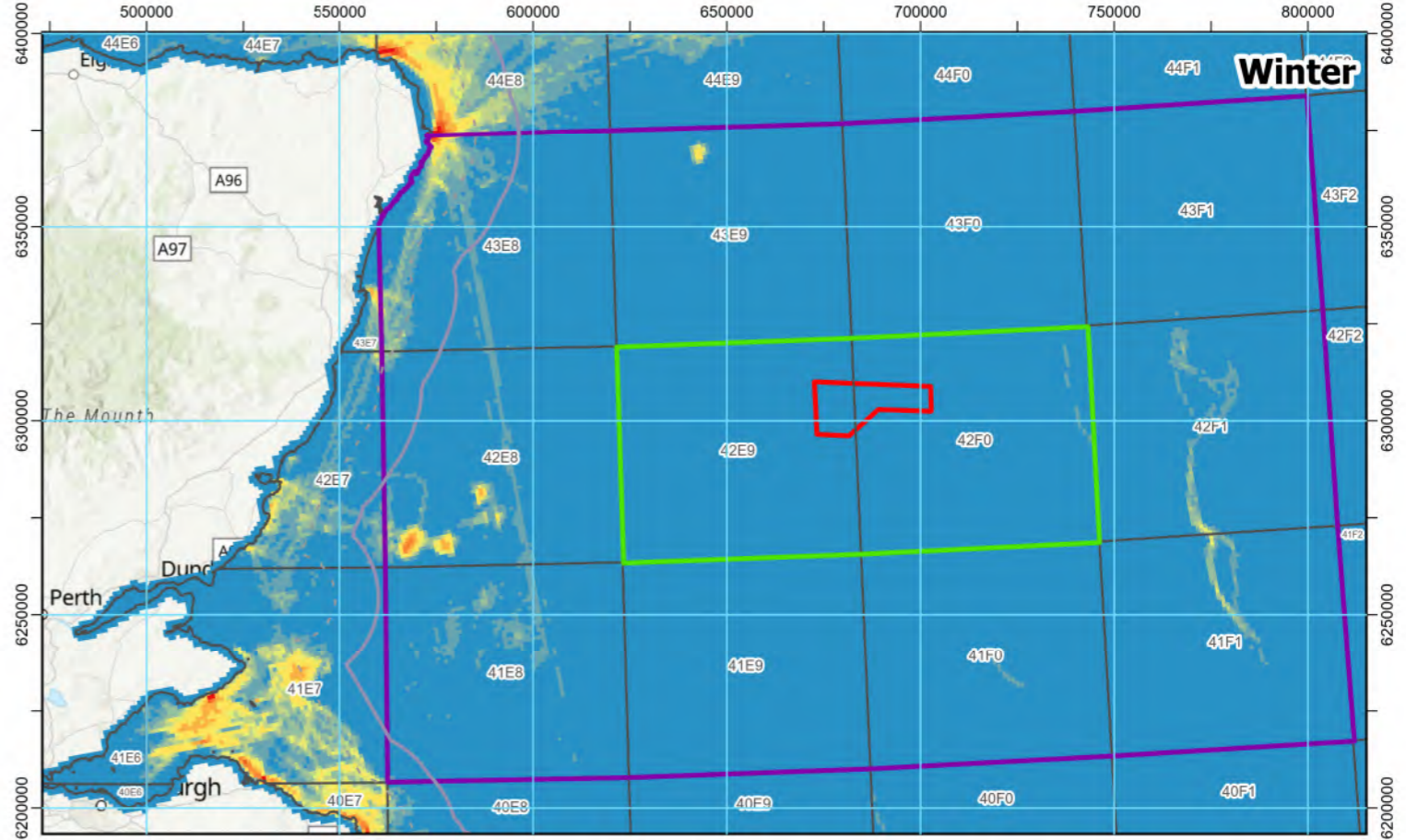
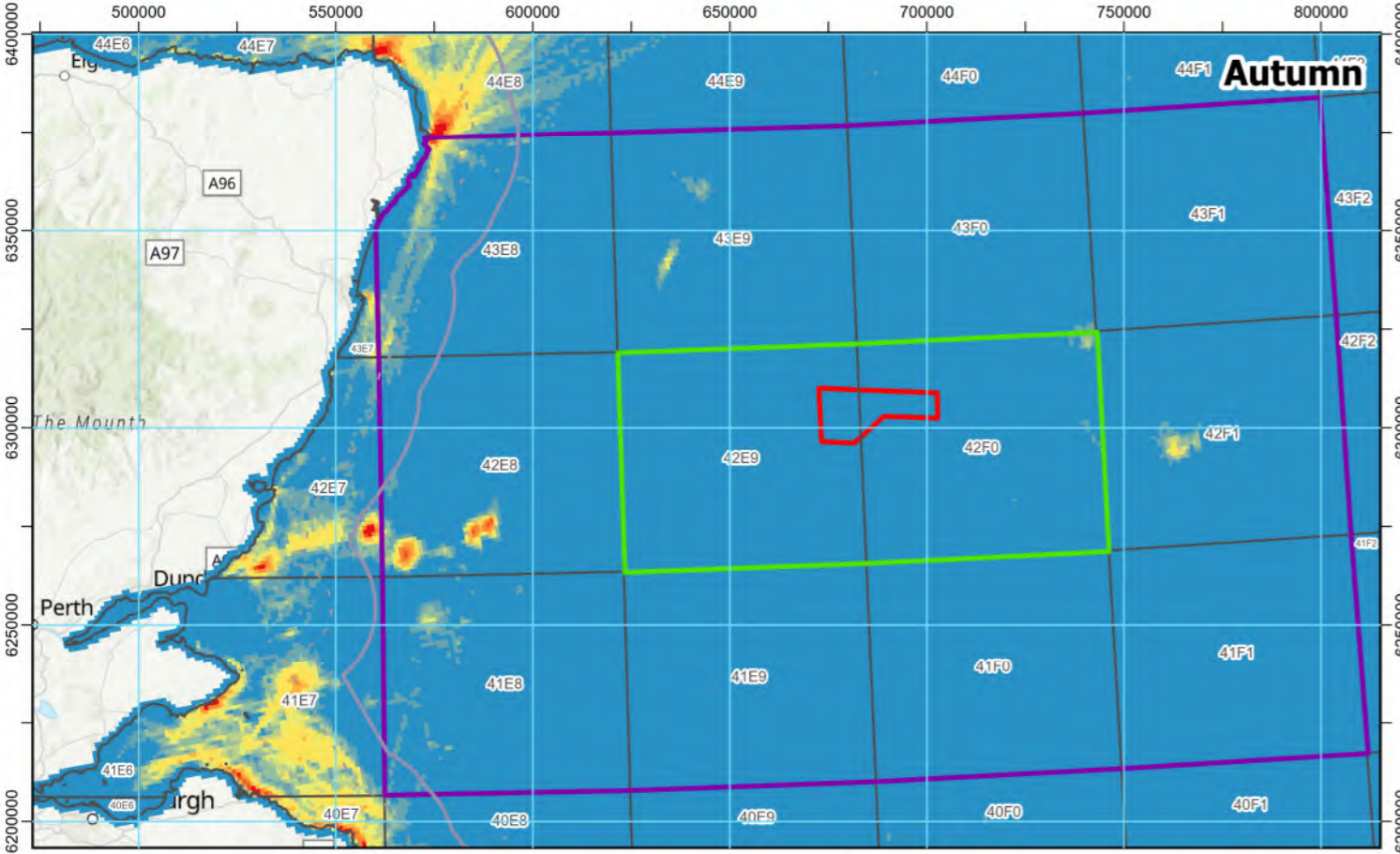
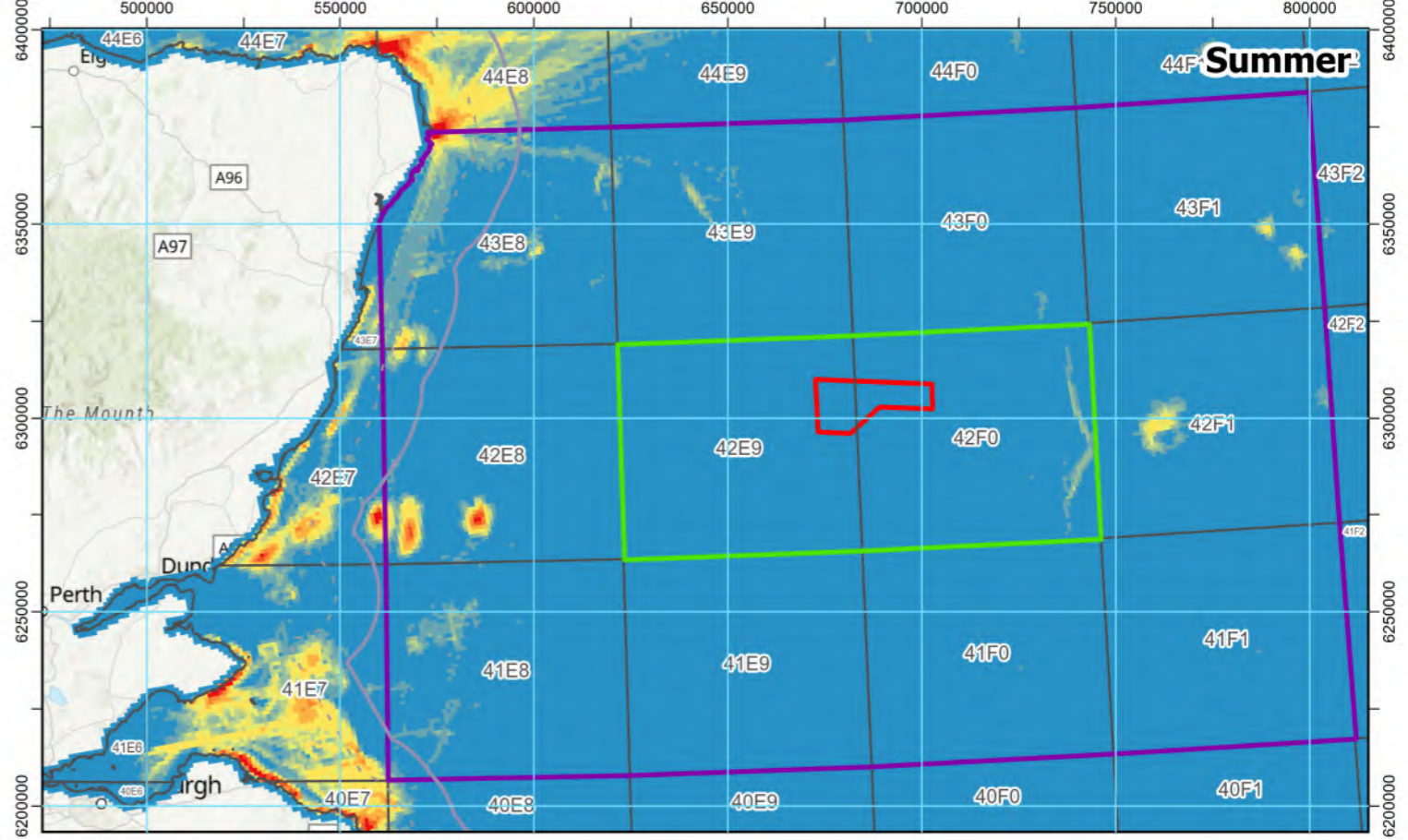
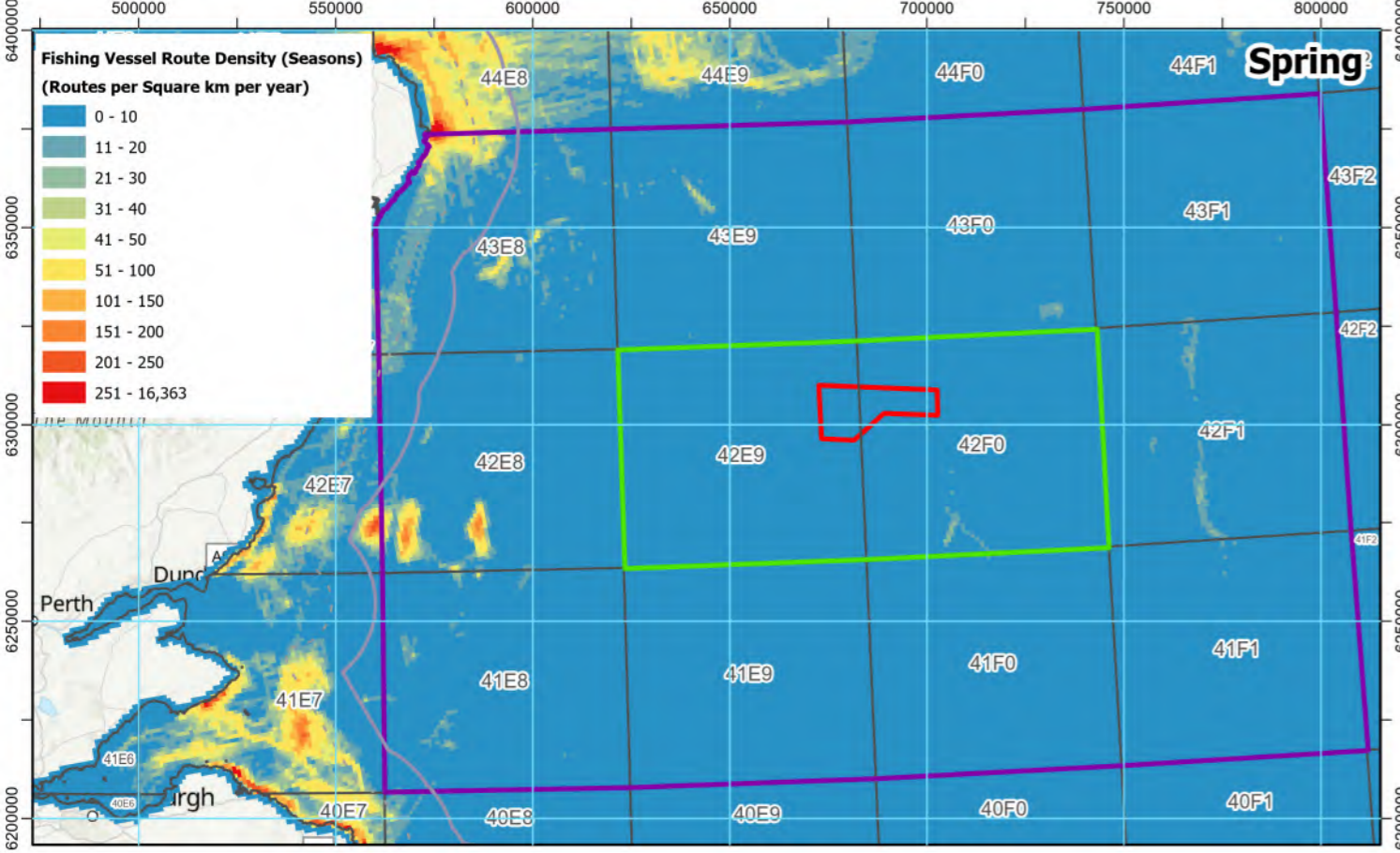
Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_115 **Figure 11.1.28**



- Legend:**
- Bellrock Wind Farm Development Area
  - Commercial Fisheries Local Study Area
  - Commercial Fisheries Regional Study Area
  - International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
  - 6 nm Limit
  - 12 NM limit

1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
			Scale @ A3		
			1:1,800,000		

Figure Title: <b>Automatic Identification System Data Fishing Vessel Route Density Routes per Square km per Year (2019 to 2022)</b>	
Project: Bellrock Wind Farm Development Area (WFDA)	Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report
Drawing No.: RHDV_BEL_CST_REP_0003_116	<b>Figure 11.1.29</b>



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 6 nm Limit
- 12 NM limit

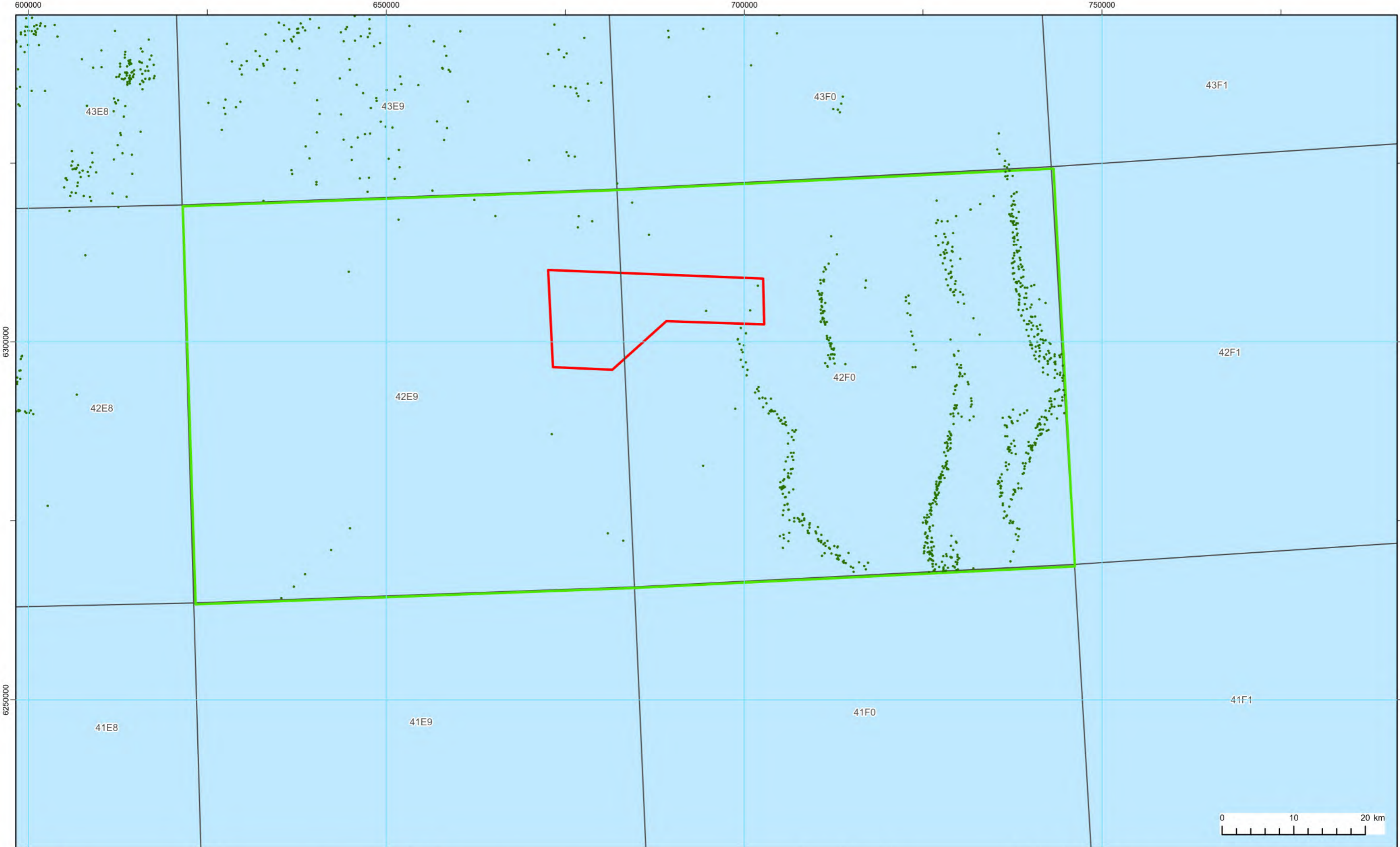
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Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
			Scale @ A3		
			1:1,800,000		

Figure Title: **Automatic Identification System Data Fishing Vessel Route Density Routes per Square km per Season (2022)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_117 **Figure 11.1.30**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit
- Active fishing surveillance records

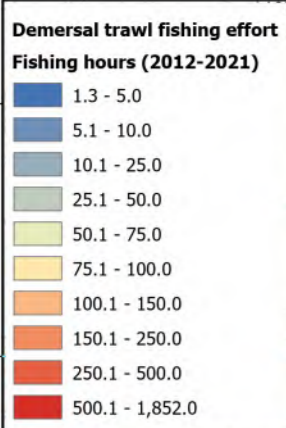
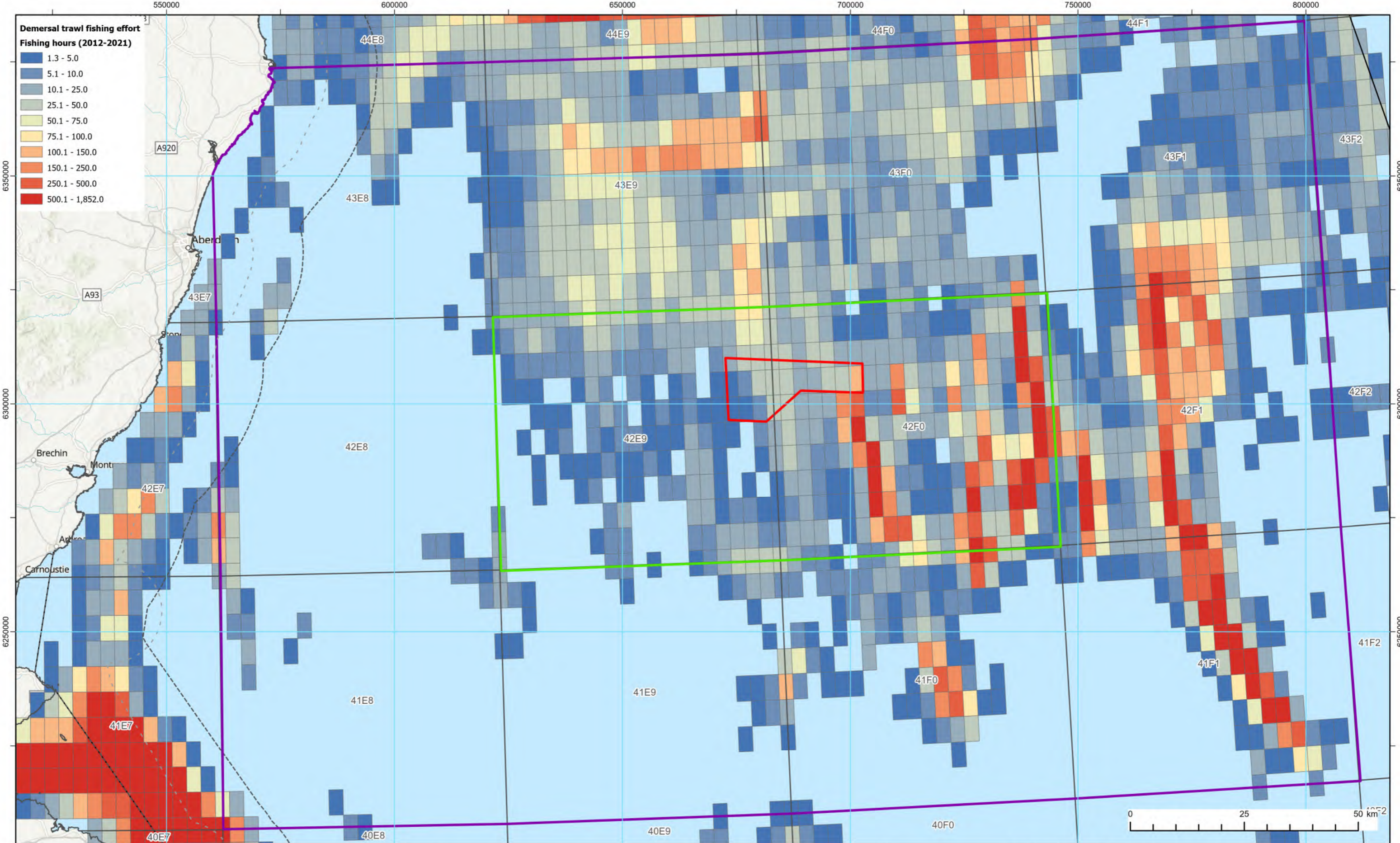
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REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
			Scale @ A3		
			1:480,000		

Figure Title:  
**Surveillance Sightings Data  
Active Fishing Vessels, 2017-2022**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_118 **Figure 11.1.31**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

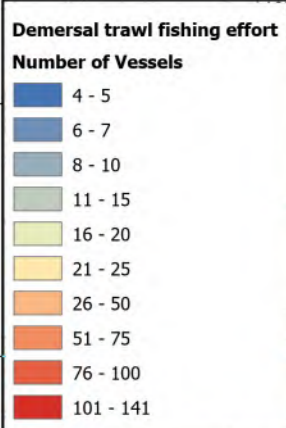
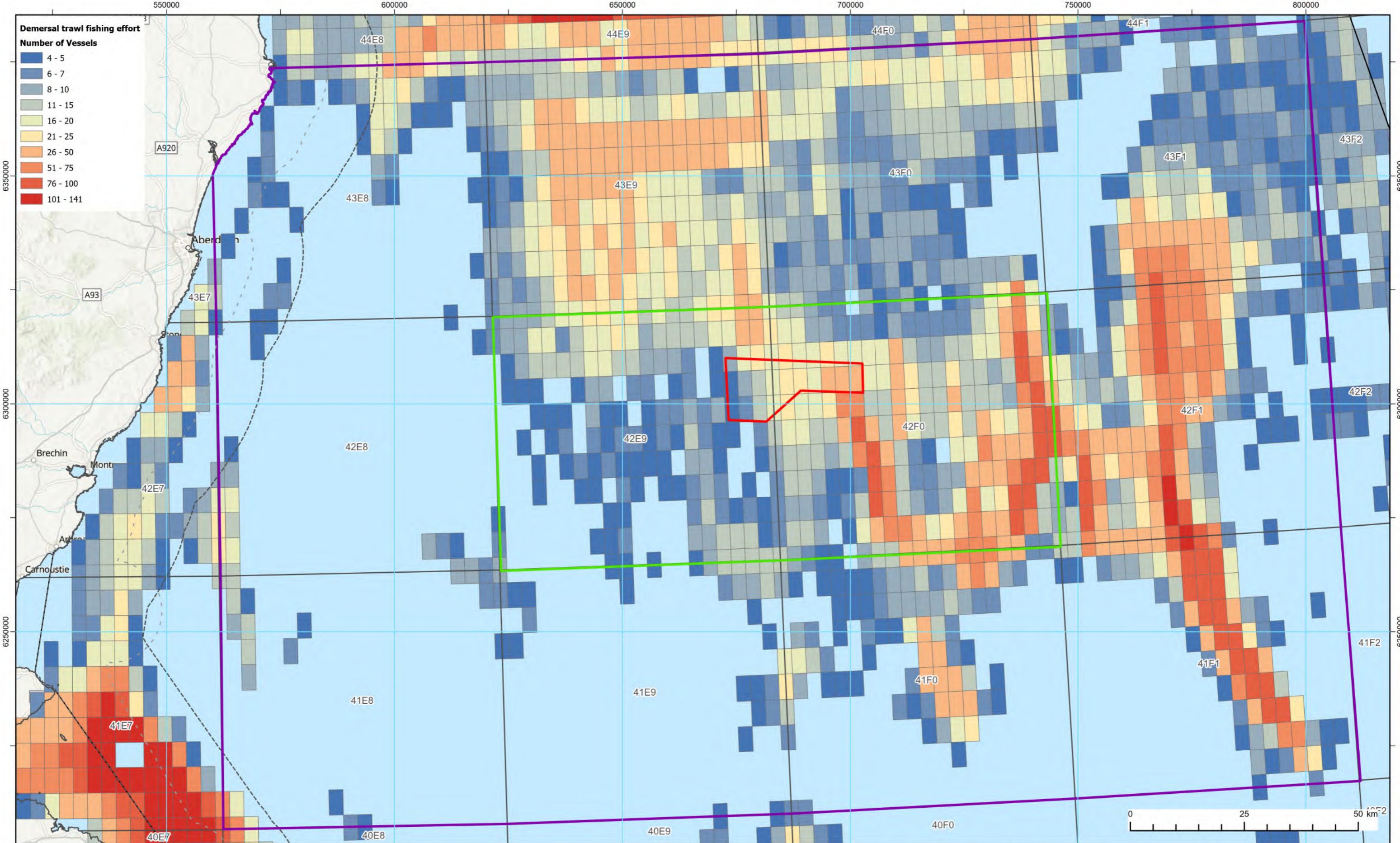
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Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

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

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_119 **Figure 11.1.32**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

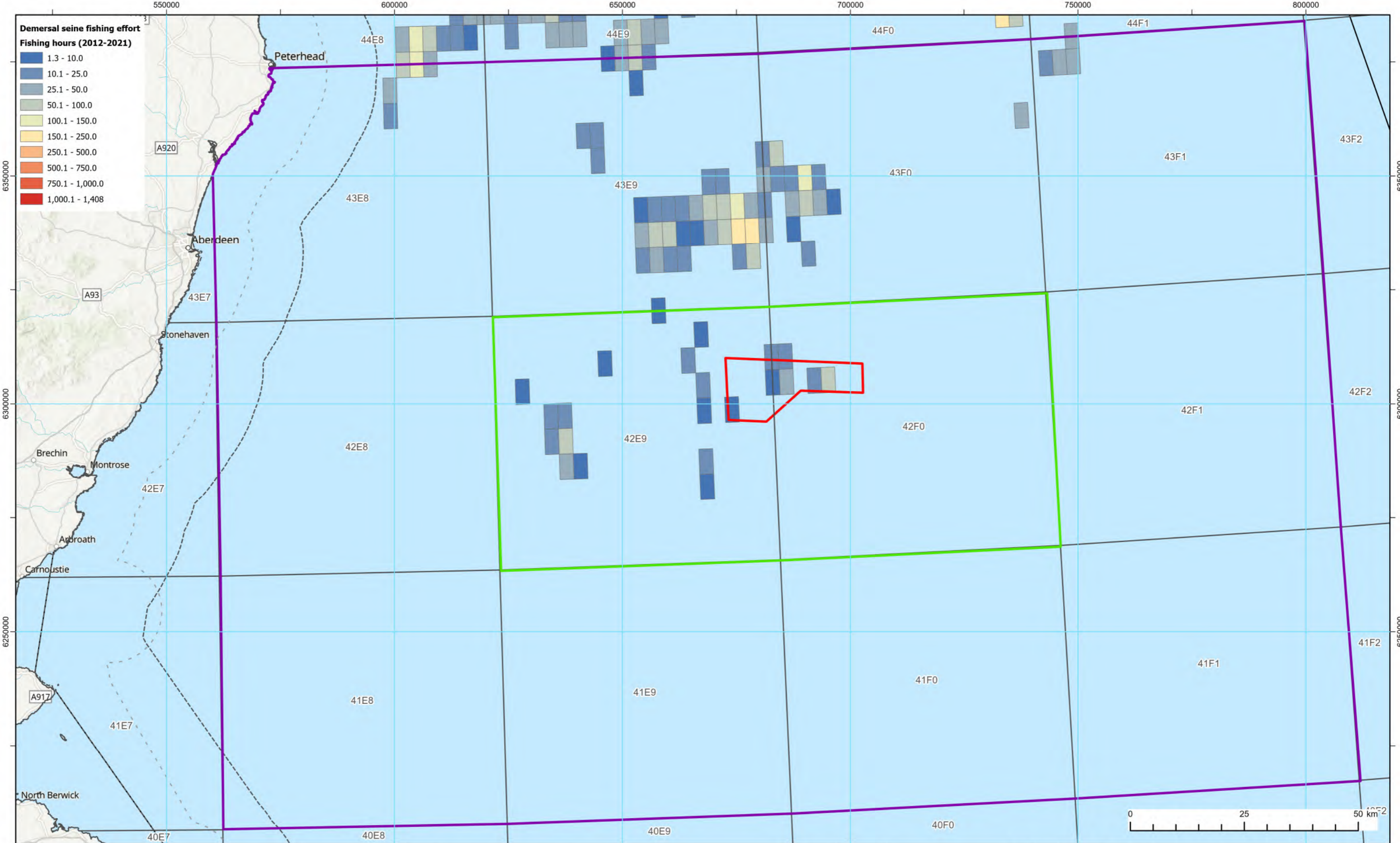
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REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

Figure Title: **Number of Vessels Deploying Demersal Trawl Gear Based on FISMaDiM Data (Cumulative 2012-2021)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_120 **Figure 11.1.33**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

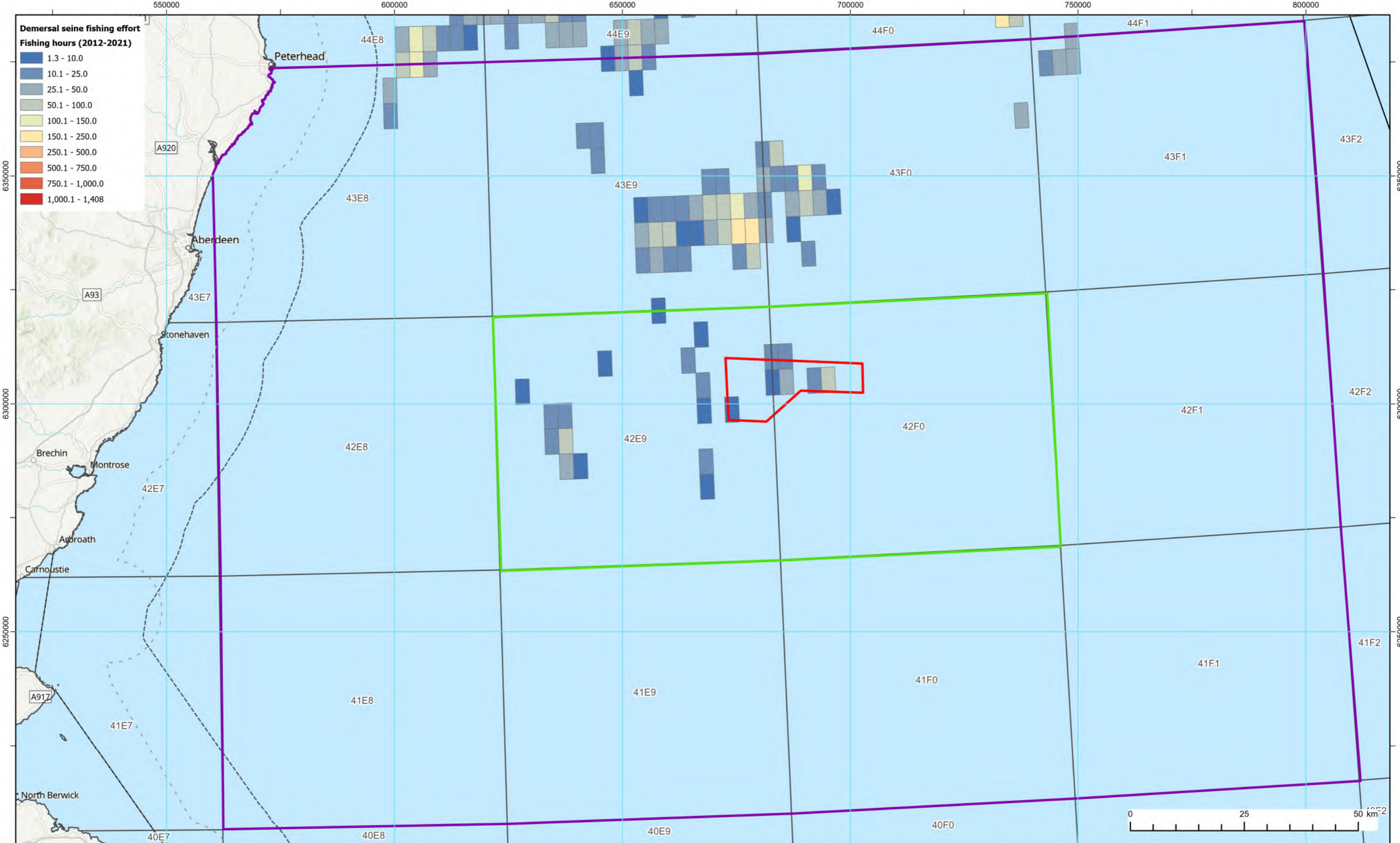
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REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
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Scale @ A3			1:750,000		

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

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_121 **Figure 11.1.34**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

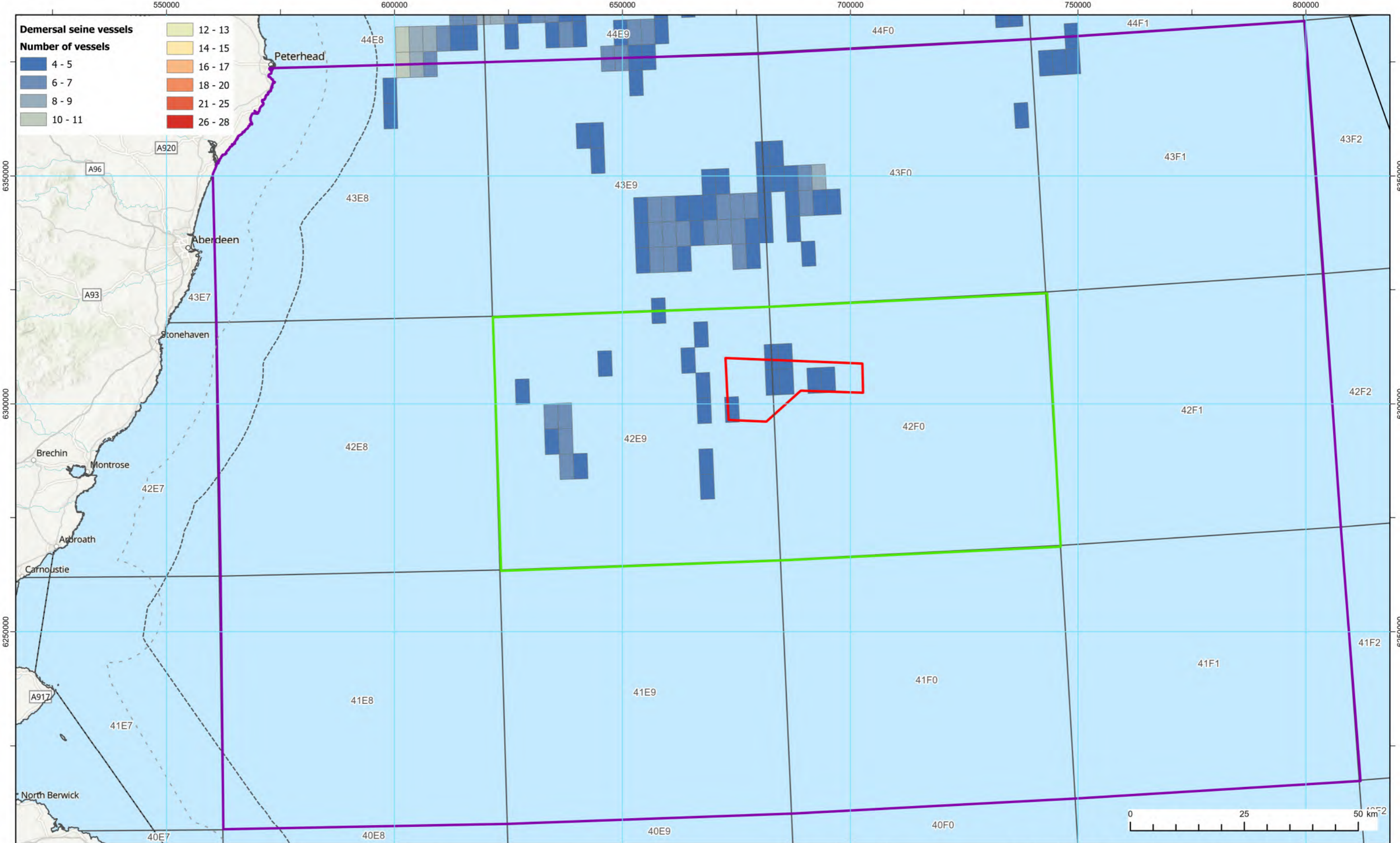
1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

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

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_121 **Figure 11.1.34**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

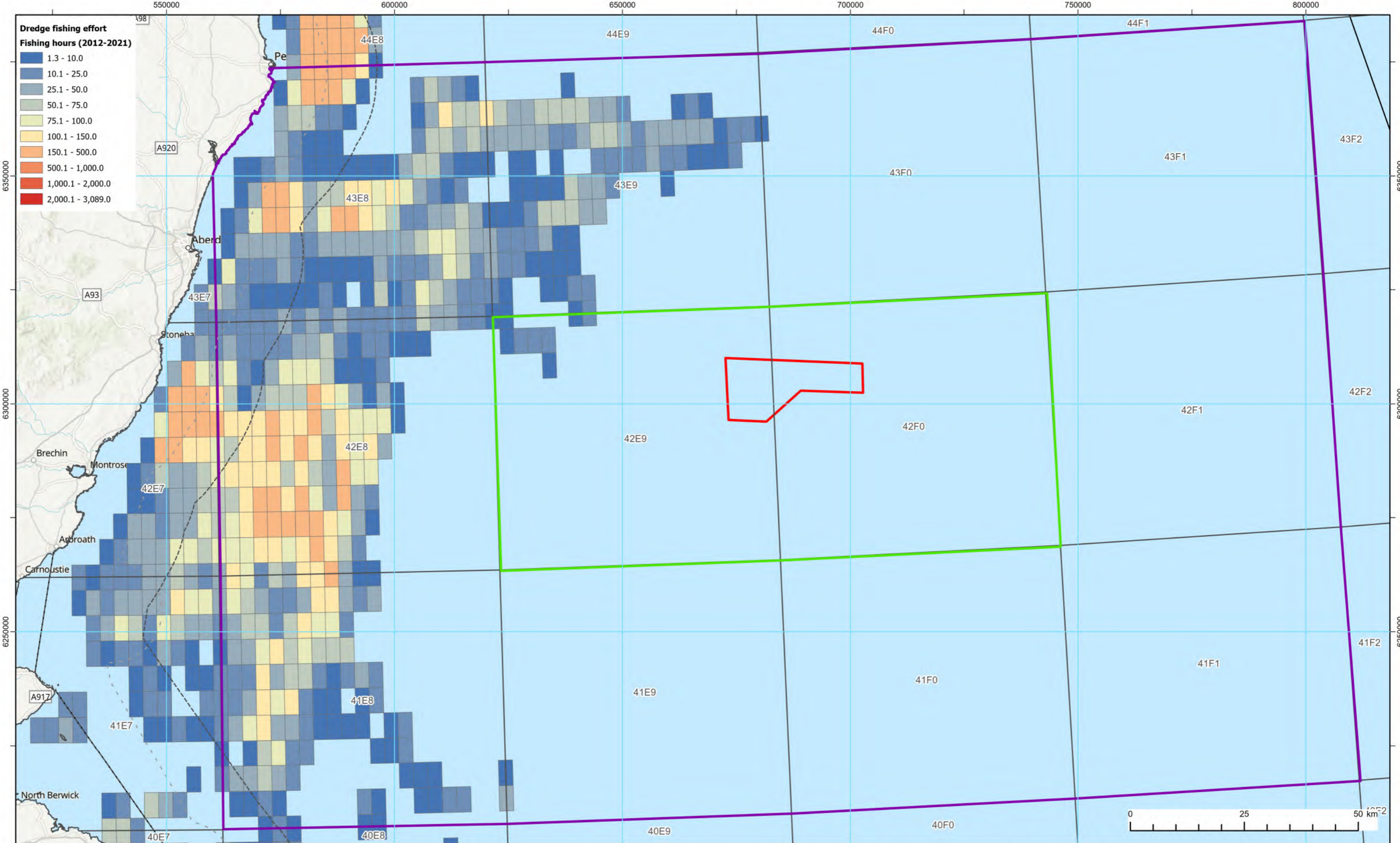
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REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

Figure Title: **Number of Vessels Deploying Demersal Seine Gear Based on FiSMaDiM Data (Cumulative 2012-2021)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_122 **Figure 11.1.35**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N  
 Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.

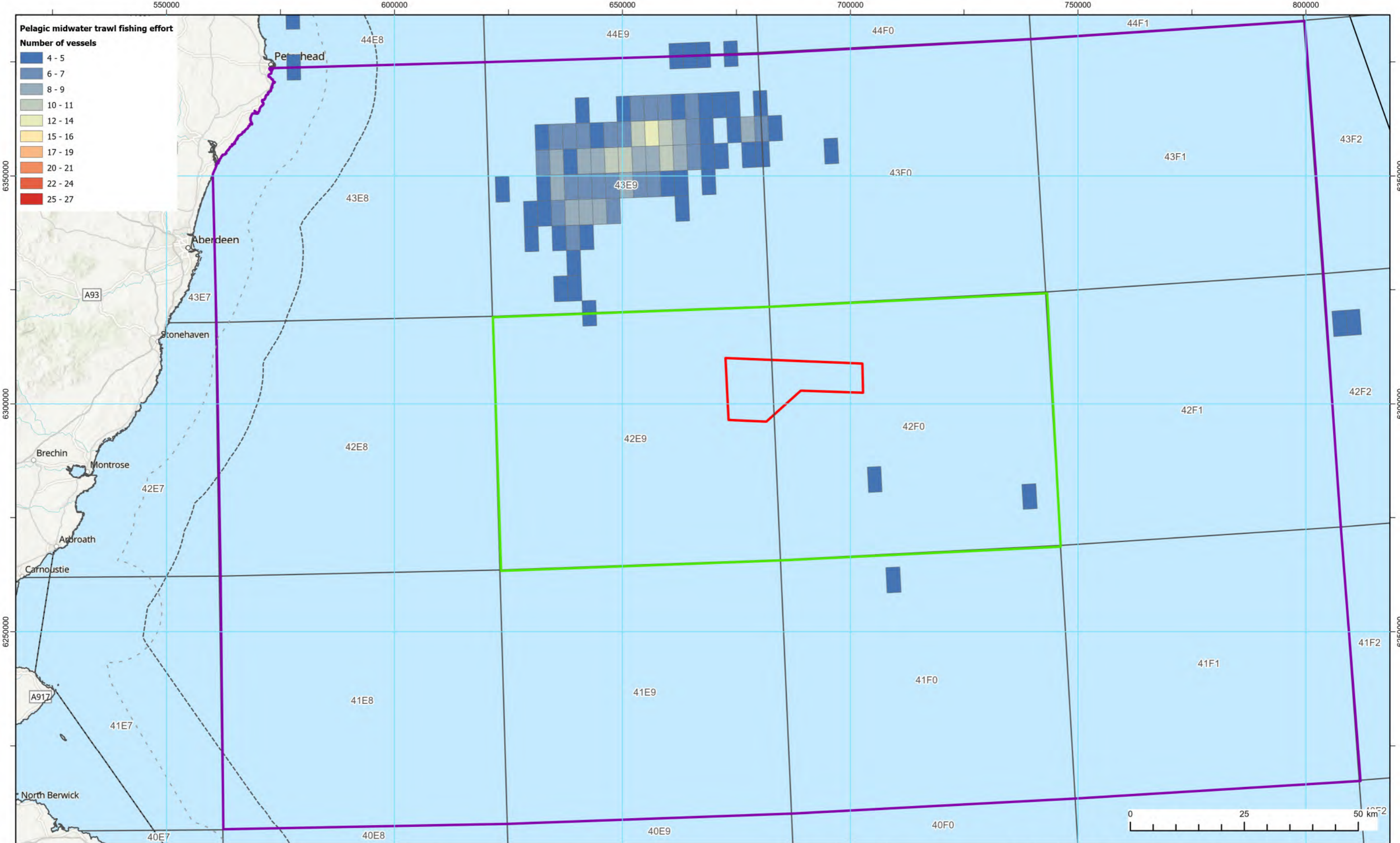
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Figure Title: **Dredge Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_123 **Figure 11.1.36**



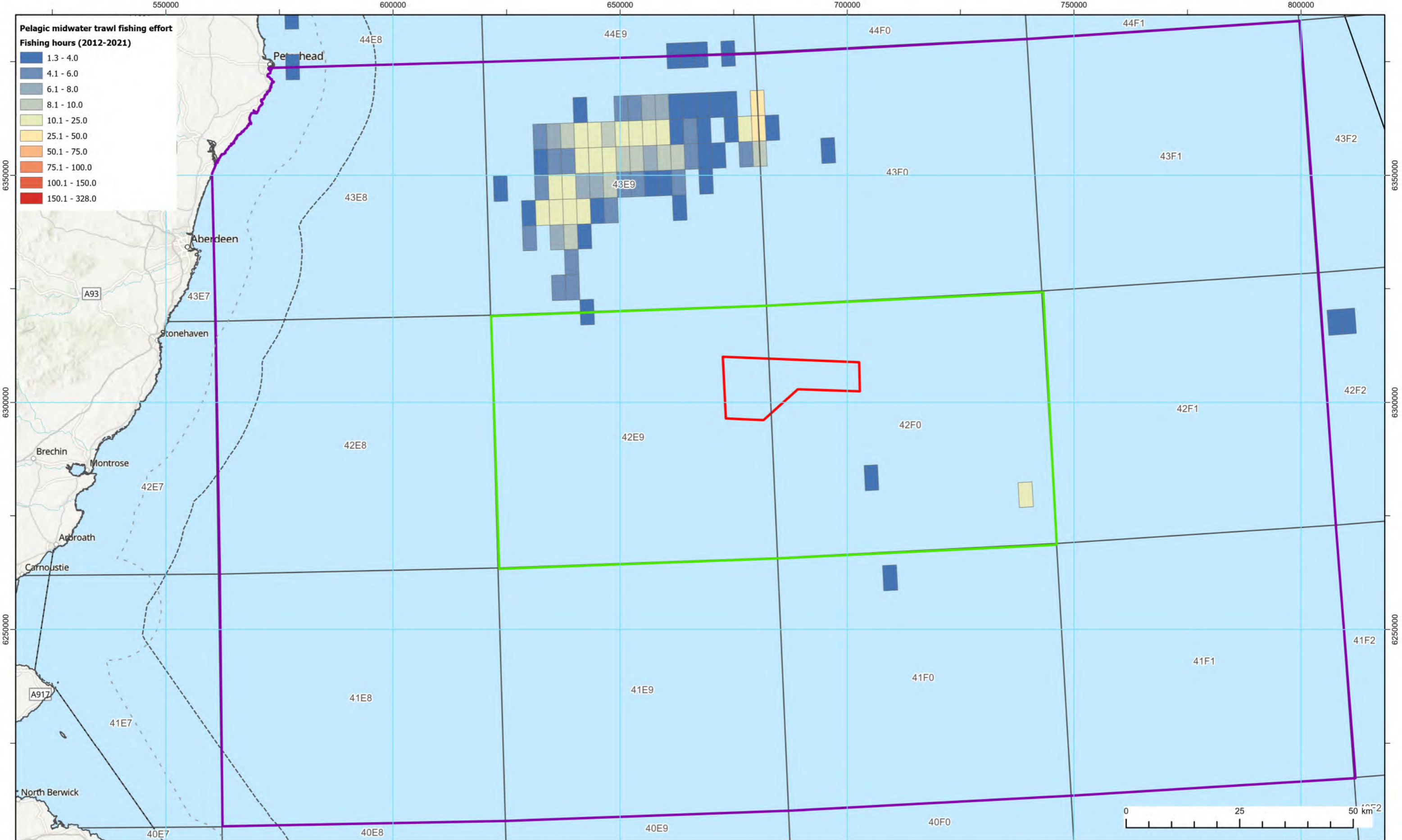
- Legend:**
- Bellrock Wind Farm Development Area
  - Commercial Fisheries Local Study Area
  - Commercial Fisheries Regional Study Area
  - International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
  - 12 nm Limit
  - 6 nm Limit

1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
			Scale @ A3		
			1:750,000		

Figure Title: **Number of Vessels Deploying Dredge Gear Based on FiSMaDiM Data (Cumulative 2012-2021)**

Project: Bellrock Wind Farm Development Area (WFDA)      Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_124      **Figure 11.1.37**



**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



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

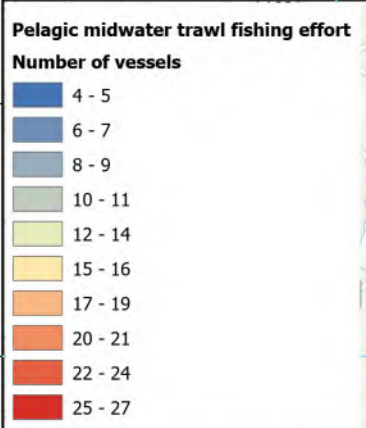
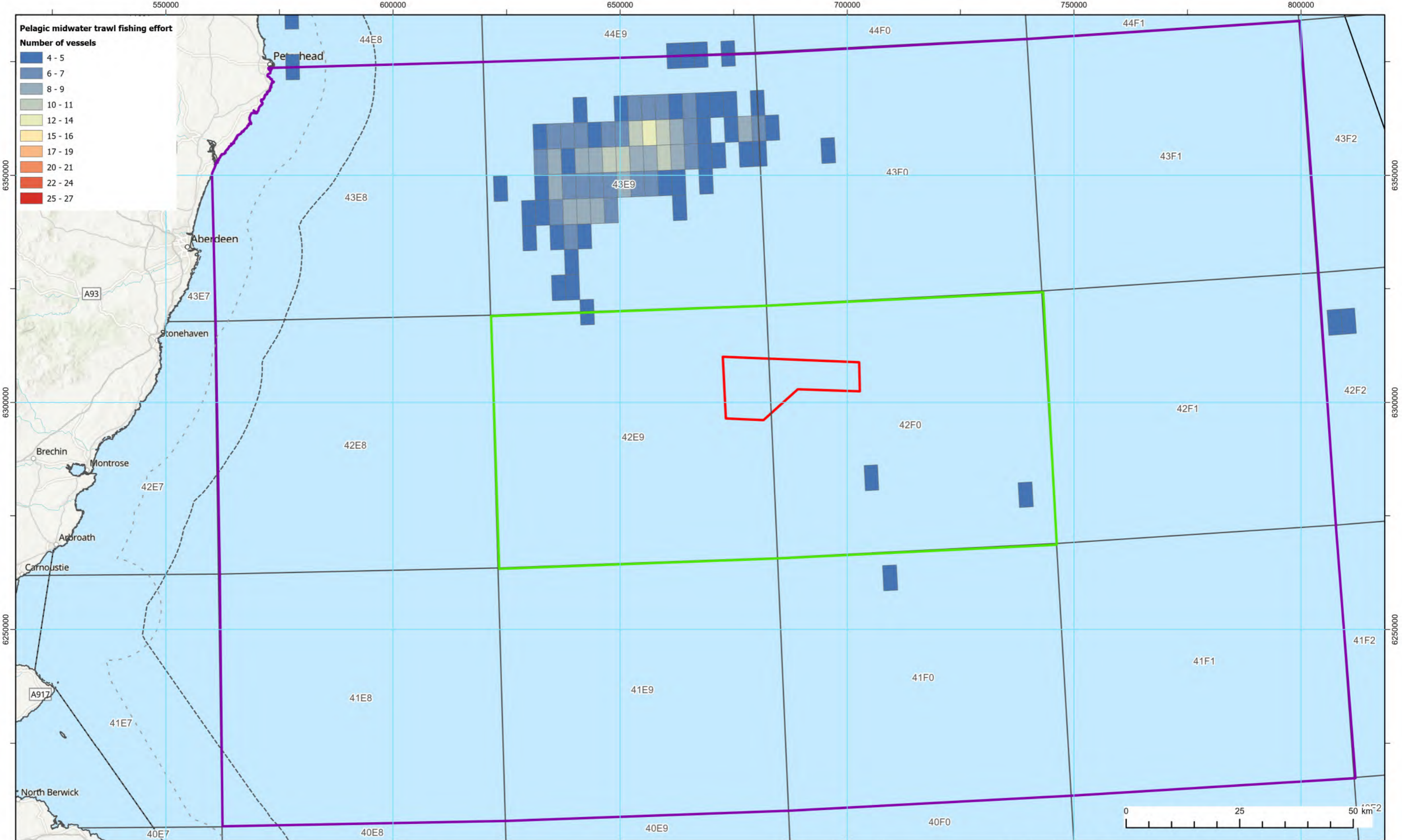
1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

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

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report  
Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_125 **Figure 11.1.38**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

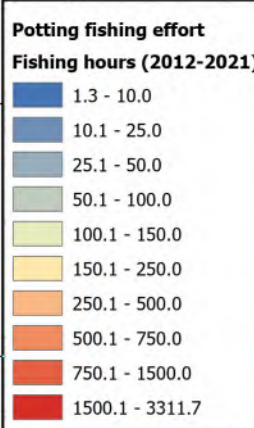
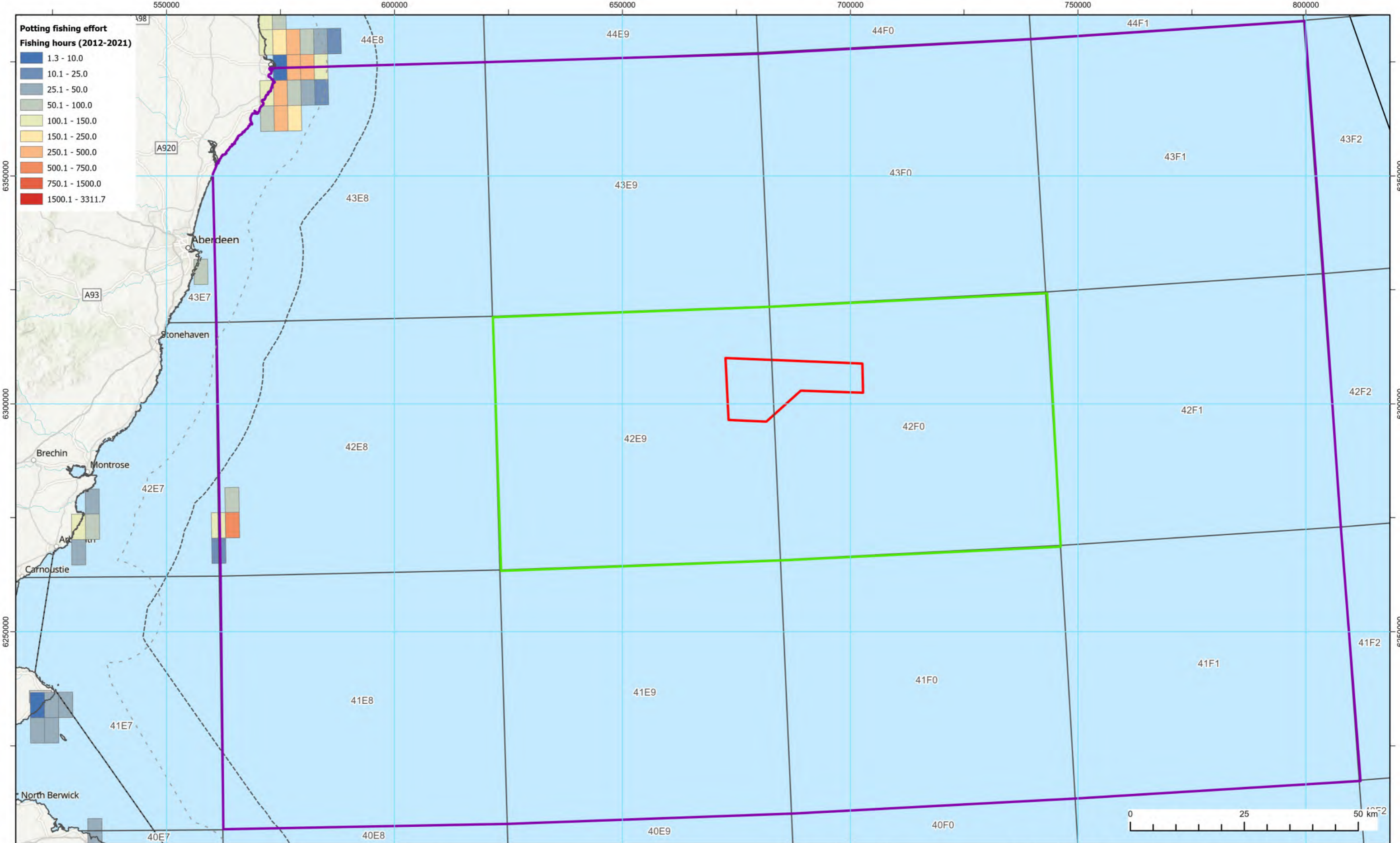
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REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

Figure Title: **Number of Vessels Deploying Pelagic Trawl Gear Based on FiSmaDiM Data (Cumulative 2012-2021)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_126 **Figure 11.1.39**



- Legend:**
- Bellrock Wind Farm Development Area
  - Commercial Fisheries Local Study Area
  - Commercial Fisheries Regional Study Area
  - International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
  - 12 nm Limit
  - 6 nm Limit

REV	DATE	STATUS	DRW	CHK	APR
1	31/03/26	Final	FN	SA	BMcG

Coordinate System: WGS 1984 UTM Zone 30N  
 Source: Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, Esri, USGS, © Haskoning UK Ltd, 2024.

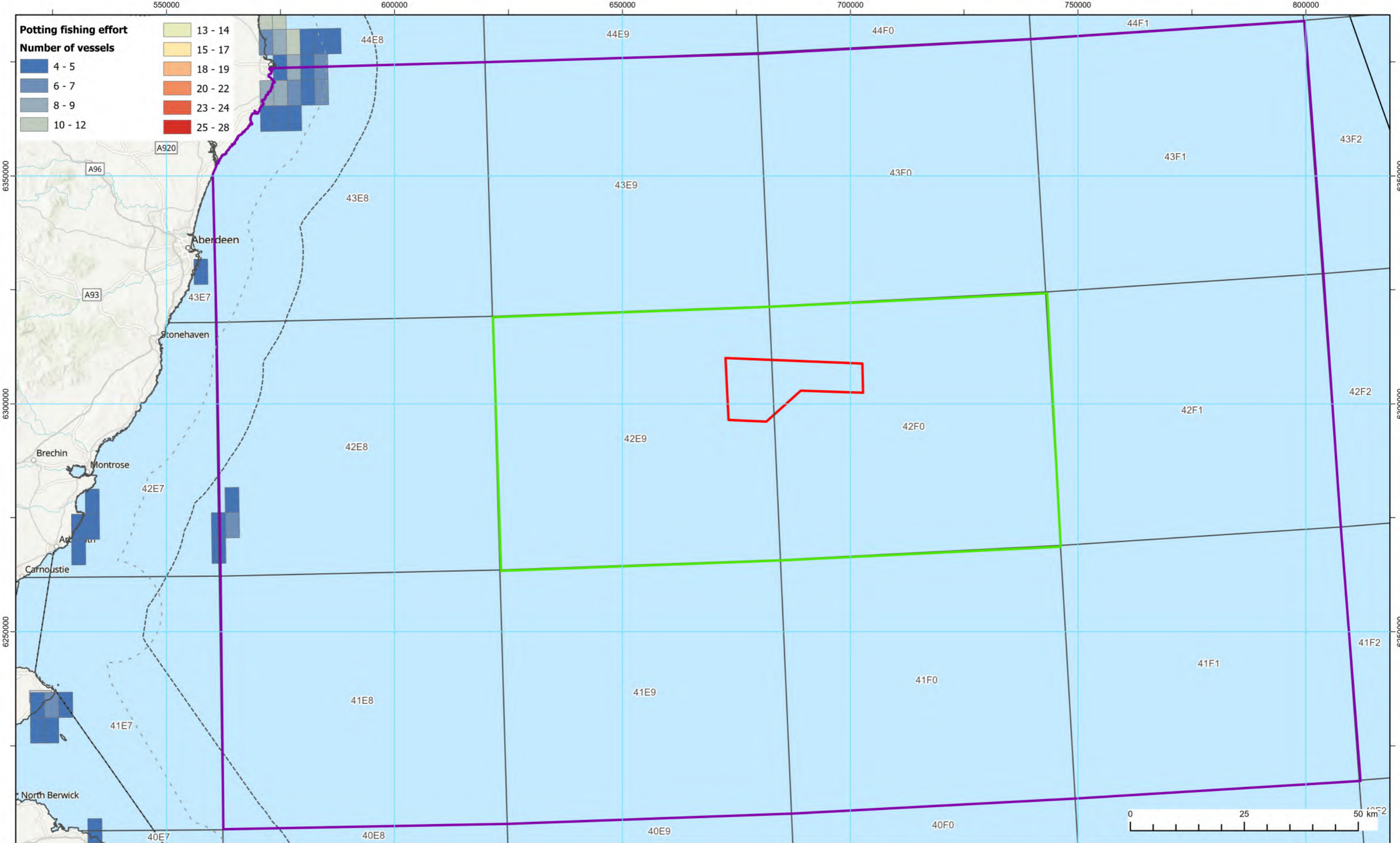
Scale @ A3  
 1:750,000

Figure Title: **Potting Fishing Effort (Hours) Based on FiSMaDiM Data (Cumulative 2012-2021)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_127 **Figure 11.1.40**



**Legend:**

- Bellrock Wind Farm Development Area
- Commercial Fisheries Local Study Area
- Commercial Fisheries Regional Study Area
- International Council for the Exploration of the Seas Statistical Rectangles (Including Codes)
- 12 nm Limit
- 6 nm Limit

1	31/03/26	Final	FN	SA	BMcG
REV	DATE	STATUS	DRW	CHK	APR
Coordinate System: WGS 1984 UTM Zone 30N					
Source: Esri, CGIAR, N Robinson, NCEAS, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS, Esri UK, Esri, TomTom, Garmin, FAO, METI/NASA, USGS, © Haskoning UK Ltd, 2024.					
Scale @ A3			1:750,000		

Figure Title: **Number of Vessels Deploying Potting Gear Based on FiSmaDiM Data (Cumulative 2012-2021)**

Project: Bellrock Wind Farm Development Area (WFDA)

Report: EIA Report Appendix 11.1: Commercial Fisheries Baseline Report

Drawing No.: RHDV\_BEL\_CST\_REP\_0003\_128 **Figure 11.1.41**

