LLŶR FLOATING OFFSHORE WIND PROJECT

Llŷr Floating Offshore Wind Farm

Environmental Statement

Volume 6: Appendix 26A – Commercial Fisheries Baseline Report

August 2024

Prepared by: Llyr Floating Wind Ltd

FLOVENTIS ENERGY

Document Status

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Prepared for	Llŷr Floating Wind Limited
Approved by	Jay Hilton-Miller

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Acronyms and abbreviations

Acronym or Abbreviation	Definition	Acronym or Abbreviation	Definition
AIS	Automatic Identification System	m	Metres
cm	Centimetre	MAP	Multi Annual management Plan
DCF	Data Collection Framework	MCRS	Minimum Conservation Reference Size
EEZ	Exclusive Economic Zone	mm	Millimetre
EIA	Environmental Impact Assessment	MMO	Marine Management Organisation
ES	Environmental Statement	NM	Nautical Mile
EU	European Union	NRA	Navigational Risk Assessment
FLO	Fisheries Liaison Officer	OfECC	Offshore Export Cable Corridor
GIS	Geographic Information System	SAR	Swept Area Ratio
hp	Horsepower	STECF	Scientific, Technical and Economic Committee for Fisheries
ICES	International Council for the Exploration of the Sea	t	Tonne
IFCA	Inshore Fisheries and Conservation Authority	TAC	Total Allowable Catch
kg	Kilograms	UK	United Kingdom
km	Kilometres	UKFEN	UK Fisheries Economic Network
knots	Nautical mile per hour	VMS	Vessel Monitoring System
kW	Kilowatts	°C	Degrees Celsius
LFW	Llŷr Floating Wind	€	Euros

Glossary of terms

Glossary of Terms	Definition
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.
Bottom trawl	A trawl towed along the seabed.
Bycatch	Catch which is retained and sold but is not the target species for the fishery.
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).
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Impact Assessment (EIA) Report.
Fish stock	Any natural population of fish which is an isolated and self-perpetuating

Glossary of Terms	Definition
	group of the same species.
Fishery	A group of vessel voyages which target the same species or use the same gear.
Fishing ground	An area of water or seabed targeted by fishing activity.
Fishing mortality	Mortality due to fishing; death or removal of fish from a population due to fishing.
Fleet	A physical group of vessels sharing similar characteristics (e.g. nationality).
Gear type	The method / equipment used for fishing.
ICES statistical rectangles	ICES standardise the division of sea areas to enable statistical analysis of data. Each ICES statistical rectangle is '30 min latitude by 1 degree longitude' in size (approximately 30 x 30 nautical miles). A number of rectangles are amalgamated to create ICES statistical areas.
Landings	Quantitative description of amount of fish returned to port for sale, in terms of value or weight.
Maximum Sustainable Yield	Maximum sustainable yield (MSY) is the largest yield (catch, in tonnes) that can be taken from a specific fish stock over an indefinite period under constant environmental conditions. Fishing at MSY levels should ensure the capacity of the stock to continue to produce this level in the long term.
Metier	A homogenous subdivision, either of a fishery by vessel type or a fleet by voyage type.
Minimum Landing Size (MLS)	Is a technical measure that limits the size of fish or shellfish species that can be legally landed and sold. The MLS varies per species. With the implementation of the Landings Obligation, the existing MLS are changed into minimum conservation reference sizes (MCRS), but they will remain largely the same.
Otter trawl	A method of bottom trawling utilising a cone-shaped 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. There are a wide variety of otter trawl varieties depending upon the nature of the ground to be fished and the target species.
Pelagic	Of or relating to the open sea.
Pelagic trawl	A net used to target fish species in the mid water column.
Pots	A collective term for structures (e.g. pots, creels, traps) into which fish or shellfish are guided or enticed through funnels that encourage entry but limit escape.
Quota	A proportion of the Total Allowable Catch for a fish stock.
Recruitment	Recruitment can be defined as the number of fish surviving to enter the fishery or to some life history stage such as settlement or maturity.
Scallop dredge	A method to catch scallop using steel dredges with a leading bar fitted with a set of spring loaded, downward pointing teeth. Behind this toothed bar (sword), a mat of steel rings is fitted. A heavy net cover (back) is laced to the frame, sides and after end of the mat to form a bag.
Spawning	The act of releasing or depositing eggs (fish).
Spawning stock biomass	The combined weight (in tonnes) of all the fish of one specific stock that are old enough to spawn. It provides an indication of the status of the stock and the reproductive capacity of the stock.
Stock assessment	An assessment of the biological stock of a species and its status in relation

Glossary of Terms	Definition
	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.
Total Allowable Catch (TAC)	TACs are catch limits, expressed in tonnes or numbers, that are set for some commercial fish stocks.
Vessel Monitoring System (VMS)	A system used in commercial fishing to allow environmental and fisheries regulatory organisations to monitor, minimally, the position, time at a position, and course and speed of fishing vessels.

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26-A COMMERCIAL FISHERIES BASELINE REPORT

26.1 Introduction

26.1.1. Overview and Purpose of this Report

1. This document has been prepared by Poseidon Aquatic Resource Management Ltd (Poseidon) to support the Environmental Impact Assessment (EIA) of the Llŷr 1 Project (hereafter referred to as 'the Proposed Project'). The Proposed Project is being developed by Llŷr Floating Wind Ltd (hereafter referred to as 'the Applicant'), a joint venture between SBM Offshore and Cierco Ltd.
2. The information on commercial fisheries activity presented in this document is intended to inform the EIA for the Proposed Project by providing a detailed understanding of the commercial fisheries baseline, against which the potential impacts of the Proposed Project can be assessed. An overview of the information presented in this Technical Report is provided in **Chapter 26: Commercial Fisheries** of the Environmental Statement (ES).
3. This document describes commercial fisheries activity, defined as fishing activity legally undertaken where the catch is sold for taxable profit. A description of charter angling activity, defined as fishing for marine species where the purpose is recreation and not sale or trade, is provided in **Chapter 28: Other Sea Users**. The ecology of the fish and shellfish species targeted by commercial fishing activity is described in **Chapter 20: Fish and Shellfish Ecology**.

26.1.2. Report Structure

4. This report is structured as follows:

- **Section 1** introduces the report and outlines its purpose;
- **Section 2** presents the methodology and data sources applied to characterise the baseline environment;
- **Section 3** presents the characterisation of the existing environment for the commercial fisheries assessment;
- **Section 4** presents the characterisation of the future baseline environment; and
- **Section 5** summarises the findings of this Report.

26.2 Methodology

26.2.3. Approach

5. This technical report has been developed following a detailed and rigorous desk-based assessment of data and literature. Both publicly available data sets and data resultant from specific requests have been analysed. Landings statistics have been analysed using Excel and Vessel Monitoring System (VMS) data have been evaluated using ArcMap Geographic Information System (GIS) software.
6. This quantitative data has been augmented by qualitative information gained through site surveys, direct consultation with the fishing industry, and communication and discussion between the Applicant, the Fisheries Liaison Officer (FLO) and the fishing industry.

26.2.4. Study Area

7. The Proposed Project is located within the southern portion of the International Council for the Exploration of the Sea (ICES) Division 7g (Celtic Sea) statistical area (**Figure 26.1-1**) within United Kingdom (UK) Exclusive Economic Zone (EEZ) waters, with the array area located outside the 12 nautical mile (NM) limit. To record fisheries landings, ICES Division 7g is divided

into statistical rectangles which are consistent across all Member States operating in the North Sea.

8. The Proposed Project array area is located within ICES rectangle 31E4 and the majority of the Offshore Export Cable Corridor (OfECC) is within rectangle 32E4, as shown in **Figure 26.1-1**. The local commercial fisheries Study Area is therefore defined as ICES rectangles 31E4 and 32E4.

9. Baseline data relevant to a wider regional Study Area comprising ICES rectangles 30E3, 30E4, 30E5, 31E3, 31E4, 31E5, 32E3, 32E4, 32E5 has also been gathered and analysed. The justification for defining this wider regional Study Area is that it aligns with the scale of statistical landings data; covers a wider area than the Proposed Project; and 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.

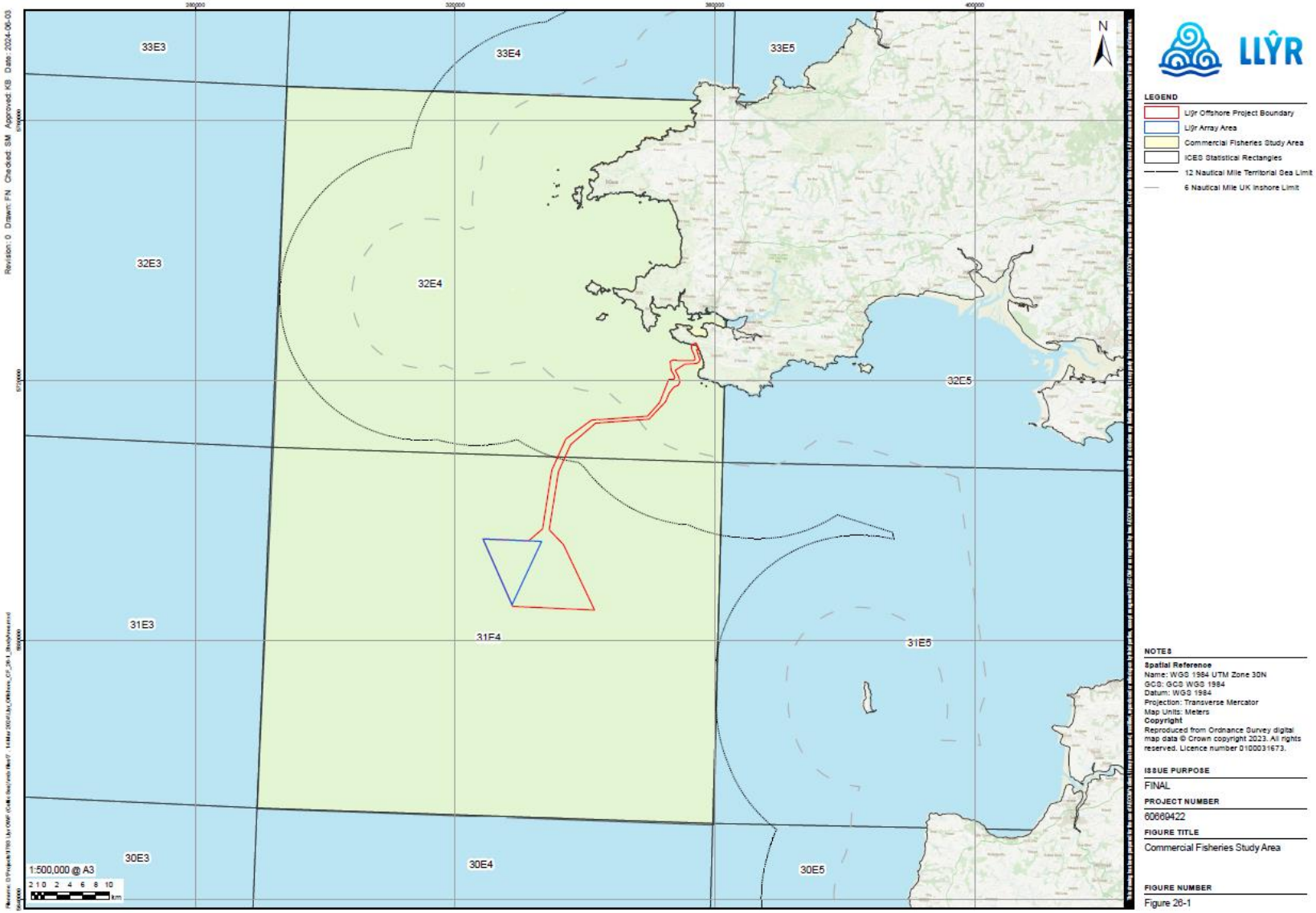

Figure 26.1-1: Commercial fisheries Study Area

26.2.5. Data Sources

10. A range of data sources have been analysed and presented within this Technical Report; these are listed in **Table 26.1-1.**

11. Data has been sourced from ICES, the EU Data Collection Framework (DCF), the UK Marine Management Organisation (MMO) and the European Maritime Safety Agency (EMSA).

12. Where data sources allow, a minimum five-year trend analysis has been undertaken, using the most recent annual datasets available at the time of writing. The temporal extent of this five-year period is dependent on each data source analysed, e.g., 2012 to 2016 or 2016 to 2021, as annotated in **Table 26.1-1**.

13. Relevant literature from a number of sources has also been reviewed in the preparation of this Technical Report. A full list of references is provided at the end of this document and are cited within the text where appropriate. Information on fishing activity across the Proposed Project area has also been provided by the project Fisheries Liaison Officer; this includes records of fishing gear observations made during Project site investigation surveys in 2022. Supplementary information is also provided by Project marine traffic surveys undertaken in 2021 and 2022.

Table 26.1-1: Data sources used to inform this technical report

Country	Data	Time period	Source	Limitations and Uncertainty
UK	Landings statistics data for UK-registered vessels, with data query attributes for: landing year; landing month; vessel length category; ICES rectangle; vessel/gear type; port of landing; species; live weight (tonnes); and value. These landings statistics are published annually by the MMO and include vessels registered to the following UK administrations and British crown dependencies: England, Wales, Scotland, Northern Ireland, Isle of Man (IOM), Guernsey and Jersey. Commercial fishing vessels that are registered to the IOM are required to hold both IOM and UK fishing licences.	2016 to 2021 During preparation of this report, landings statistics for 2022 were also published and have been incorporated.	Marine Management Organisation (MMO)	The data is 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.
All Europe	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).	2012 to 2016	European Union (EU) Data Collection Framework (DCF) database	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 rom larger vessels. • For UK vessels under 10 m length data is assessed with: high uncertainty and low confidence. • For all other EU vessels data is assessed with: low uncertainty and high confidence.
UK	VMS data for UK registered vessels ≥15m length. Note that UK vessels ≥12 m in length have VMS on board, however, to date, the MMO provide amalgamated VMS datasets for ≥15 m vessels only. VMS data sourced from MMO displays the first sales value (£) of catches.	2016 to 2019	MMO	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.
All Europe	VMS data for EU registered vessels ≥12m length. VMS data sourced from ICES displays the surface Swept Area Ratio (SAR) of catches by different gear types and covers EU (including UK) registered vessels 12m and over in length. Surface SAR indicates the number of times in an annual period that a demersal fishing gear makes	2017 to 2022	ICES	The data is only available for 12 m and over vessels, so is not representative of <1 2m vessels. • Data assessed with: medium uncertainty and medium confidence.

Country	Data	Time period	Source	Limitations and Uncertainty
	contact with (or sweeps) the seabed surface. Surface SAR provides a proxy for fishing intensity.			
All Europe	Fishing vessel route density, based on vessel Automatic Information System (AIS) positional data. AIS is required to be fitted on fishing vessels ≥15m length.	2019 to 2022	European Maritime Safety Agency (EMSA)	The data is only available for 15m and over vessels, so is not representative of <15 m vessels. • Data assessed with: medium uncertainty and medium confidence.
Wales	Generalised fishing activity maps for mobile and static gear operating in Welsh waters.	2019	Welsh National Marine Plan	The data sources (Murray et.al., 2015; Pantin et.al., 2015; Richardson 2006a; Richardson, 2006b) that have been compiled to prepare fishing activity maps are partial, have been drawn from various unverified sources and some of the information is dated, originating from as early as 2004. These datasets represent samples of fishing activity only and thus do not give an absolute measure of fishing activity in Welsh waters. • Data assessed with: medium uncertainty and medium confidence.
All Europe	Fisheries surveillance data, capturing aerial and patrol vessel surveillance observations. Location of fishing vessel, fishing gear type and vessel nationality are noted, and vessel activity is recorded as 'fishing', 'steaming' or 'laid'.	2013 to 2017	MMO	The data shows surveillance observations gathered to inform MMO fisheries compliance and enforcement activity. Data is subject to survey effort (typically weekly and during daylight hours). There are also temporal gaps in sightings. Fishing method and nationality is assigned by sight only. • Data assessed with: medium uncertainty and medium confidence.
Wales	Total scallop fishing vessel activity over the 2012 to 2022 scallop fishing seasons.	2012 to 2022	Welsh Government	Since 2012, vessels fishing for scallops in the Welsh scallop fishery have been required to install a VMS. VMS data has been filtered to present data on the spatial location of actively fishing scallop vessels. • Data assessed with: low uncertainty and high confidence.
UK	Marine traffic (AIS and radar) survey data.	Summer 2021 and Winter 2022	Anatec	An assessment undertaken into fishing vessel activity to inform the Navigational Risk Assessment (NRA) undertaken for the Project. Based on a 14-day AIS and radar survey in summer 2021 and winter 2022. • Data assessed with: low uncertainty and high

Country	Data	Time period	Source	Limitations and Uncertainty
				confidence.
UK	Fishing gear observations recorded during site investigation survey.	2022	Applicant	The data shows the location of static fishing gear markers, as observed during site investigation survey. • Data assessed with: low uncertainty and high confidence.

Data Limitations and Uncertainties

14. No single source of data can be used to comprehensively describe commercial fishing activity. A range of different data limitations and uncertainty exist for all of the commercial fisheries datasets used to inform this technical report. The level of uncertainty and confidence of each data set is defined in **Table 26.1-1** based on the professional judgement of the Poseidon assessment team.

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

16. It is noted that all commercial landings by UK registered vessels are subject to the Register of Buyers and Sellers 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 under the Registration of Fish Buyers and Sellers and Designation of Fish Auction Sites Regulations 2005 due to the 2005 Registration of Buyers and Sellers of First-Sale Fish Scheme (RBS legislation). The RBS legislation is applicable to licenced fishing vessels of all lengths and requires name and PLN (port letter and number) of the vessel which landed the fish to be recorded in relation to each purchase. For the 10 m and under sector, landing statistics are recorded on sales notes provided by the registered buyers (MMO, 2021). Information that may not be formally recorded on the sales note, such as gear and fishing area, is added by coastal staff based on local knowledge of the vessels they administer - for example, from observations of the vessel during inspections at ports or from air and sea surveillance activities as well as discussions with the owner and/or operator of the vessel (MMO, 2021). 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 25kg is bought per day.

17. 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 (2017-2019) is no longer available by ICES rectangle. Data at a scale of ICES division (i.e., the whole of the southern North Sea) is less useful to understand fishing activity specific to the area overlapping the proposed Project.

18. 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 ≥ 12m in length are required to have a Vessel Monitoring System on board. This reports the vessels' position to fisheries management authorities, which in the case of EU fishing vessels, is every two hours. Since 1st January 2012, this obligation has applied to vessels that are ≥ 12m 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 therefore appear to show inshore areas as having lower (or no) fishing activity compared with offshore areas, this is not necessarily the case because VMS data do not include vessels typically operating in inshore area (i.e., which typically comprises of vessels <15m in length). To assist in mitigating the risk of under-representing smaller inshore vessels, site-specific marine traffic survey data comprising information on vessel movements gathered by Automatic Identification System (AIS), radar and visual observation has been analysed alongside VMS data (Anatec, 2021 and 2022). Consultation with individual fishermen active in

the regional Study Area has also been undertaken to seek to further understand the extent and distribution of activity by the <12 m fleet.

19. Maps of fishing activity produced by the Welsh Government for inclusion in the Welsh National Marine Plan (WNMP) provide a useful indication of the spatial extent of mobile and static gear activity, though it is noted that several data sources have been compiled in preparation of these maps, each with their own limitations. It is acknowledged that some stakeholders have advised that these datasets are not considered to be representative of fishing activity in the Study Area; as such, the data are used to indicate areas of likely fishing activity, rather than suggest areas of lesser activity and are used alongside other baseline data sources and consultation outputs to inform characterisation of the existing environment.

26.3 Baseline Environment

26.3.6. Overview of Landings

Regional Overview

20. Landings by UK vessels from the local Study Area are shown in the context of the wider regional Study Area in **Figure 26.1-2** and **Figure 26.1-3**. Average annal landings from all ICES rectangles in the Study Area were £1.5 million across 2016 to 2022. Landings from ICES rectangle 31E4 within which the array area is located had an annual average value of £544,000 across the same period, and landings from ICES rectangle 32E4 within which the majority of the OfECC is located had an average annual value of £2.3 million. Landings from the local Study Area were dominated by shellfish species, reflective of a similar pattern across much of the regional Study Area with the exception of those ICES rectangles further offshore to the south of the proposed Project, where demersal and pelagic landings dominate.

21. EU landings data indicate that across the regional Study Area, vessels registered in the UK (England, Wales, Northern Ireland, Isle of Man, Scotland), Ireland, Belgium, France and the Netherlands are active. Within the local Study Area, vessels from the UK (England and Wales), Ireland, Belgium and France are likely to be active. Data indicates that Irish vessel activity is focused to the west of the local Study Area.

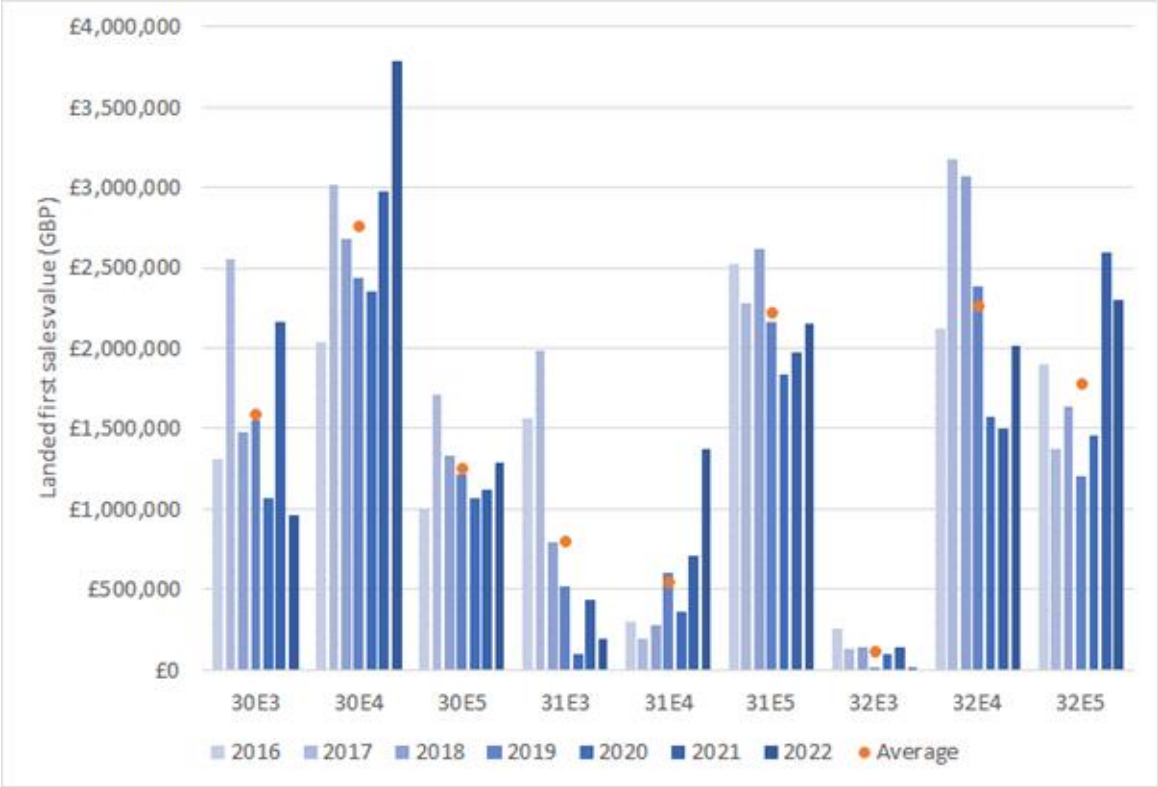

Figure 26.1-2: Value of landings (2016 to 2022) by ICES rectangle in the regional Study Area (MMO, 2023)

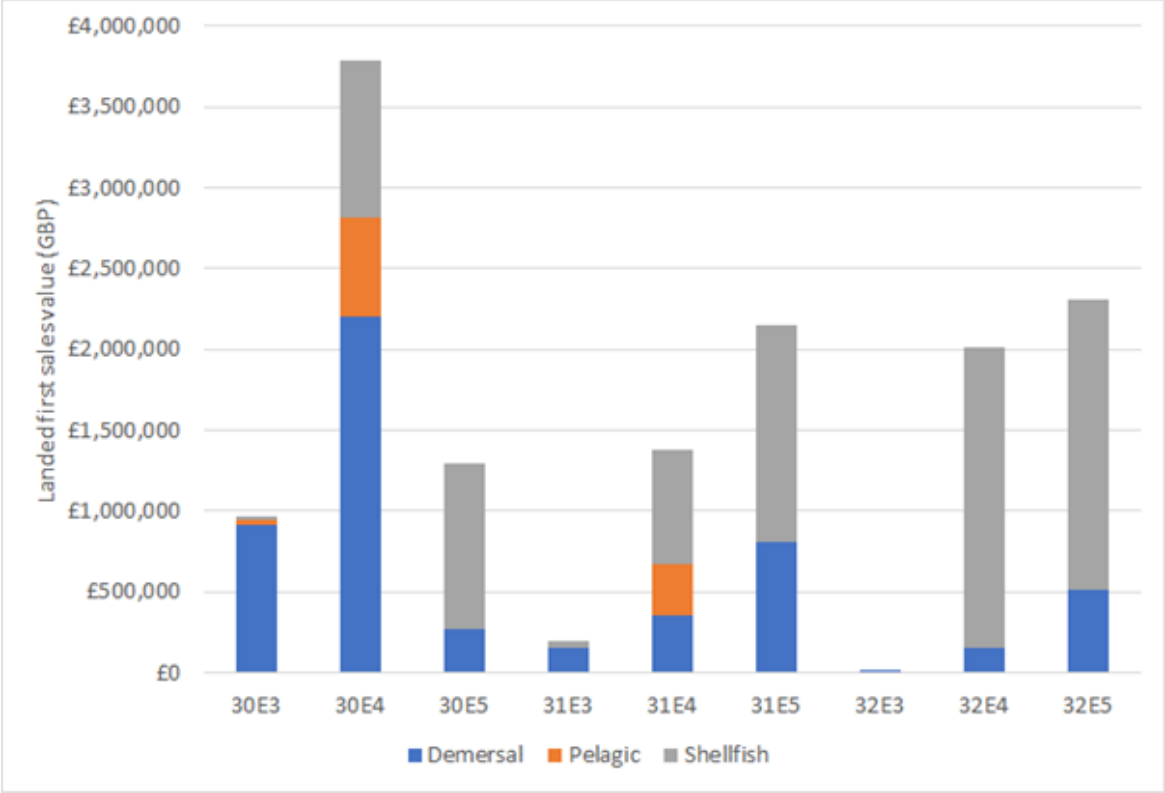

Figure 26.1-3: Value of landings (2022) by ICES rectangle and species group in the regional Study Area (MMO, 2023)

Study Area Overview

22. The annual average value of landings from UK-registered vessels from the two ICES rectangles that comprise the local Study Area is shown in **Figure 26.1-4.** Landings across the seven-year

period have been consistently of greatest value in ICES rectangle 32E4 within which the offshore export cable corridor is located. Average annual landings value in ICES rectangle 32E4 from 2016 to 2022 were £2.3 million whilst the equivalent value in ICES rectangle 31E4 was £544,000. Landings are dominated by shellfish species. 66% of all landings by UK vessels from the Study Area are made by vessels registered in Wales, with 32% made by English-registered vessels. Negligible landings were associated with vessels registered in Jersey, Northern Ireland and Scotland.

23. **Figure 26.1-5** and **Figure 26.1-6** indicate that the key species landed from ICES rectangle 31E4 (inclusive of the offshore array area) are brown crabs *Cancer pagurus*, lobsters *Homarus gammarus* and sole *Solea solea*, and from ICES rectangle 32E4 (inclusive of the majority of the OfECC) are lobsters, whelks *Buccinum undatum*, brown crabs and spider crabs *Maja brachydactyla*. By both weight and value, landings from both rectangles have shown some fluctuation across the seven-year time series, with a relative peak in 2022 in ICES rectangle 31E4, and in 2017 and 2022 in rectangle 32E4. The 2022 peak in ICES rectangle 31E4 is partially attributable to a catch of horse mackerel *Trachurus trachurus*, a pelagic species which is not typically taken in the local Study Area.

24. MMO landings statistics indicate that catches from the local Study Area are primarily landed into Milford Haven by Welsh vessels and into Padstow and Brixham by English vessels.

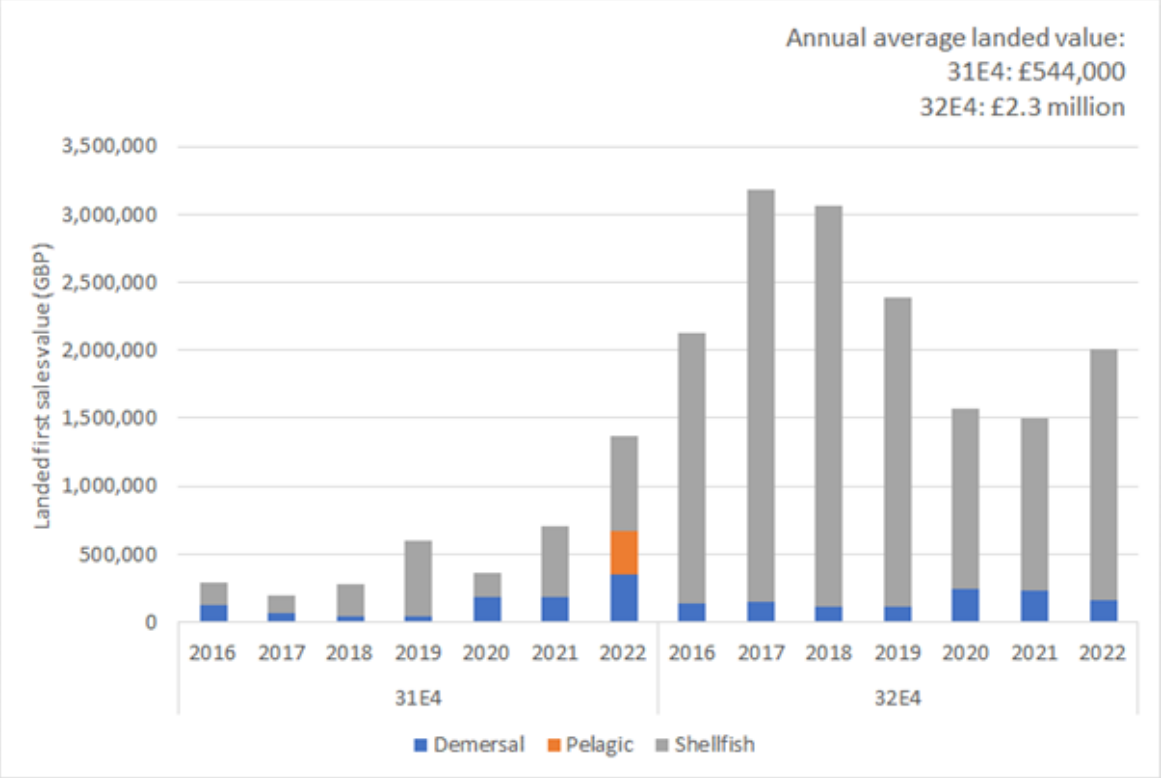

Figure 26.1-4: Value of landings (2016 to 2022) by ICES rectangle and species group (MMO, 2023)

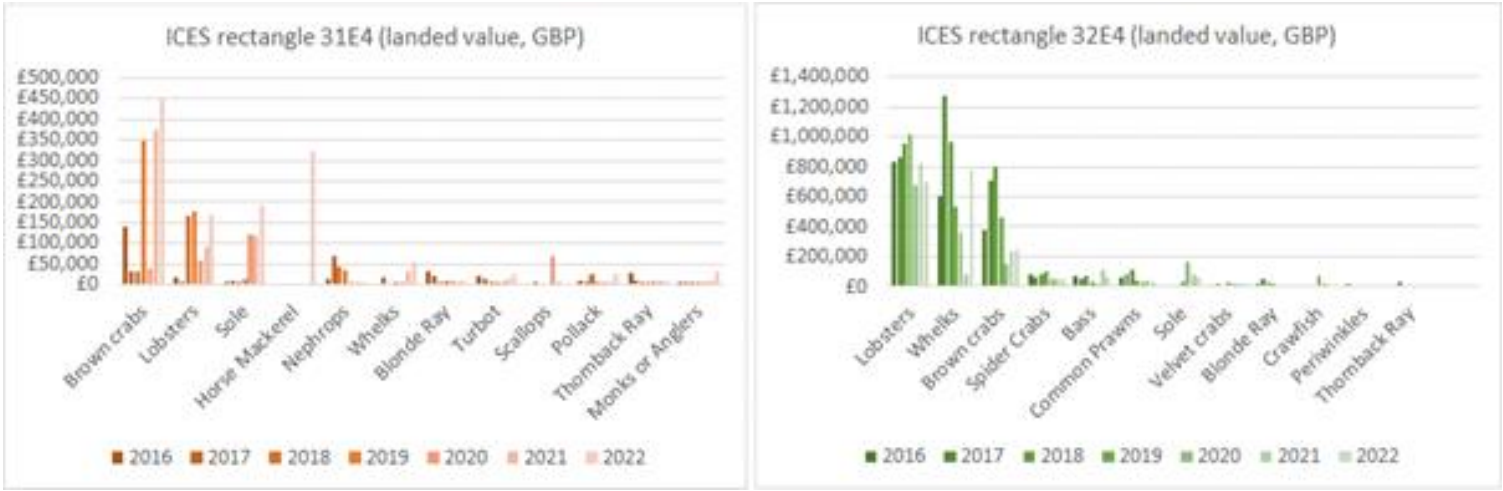

Figure 26.1-5: Key species by annual landed value (GBP) (2016 to 2022) from ICES rectangles 31E4 and 32E4 (MMO, 2023)

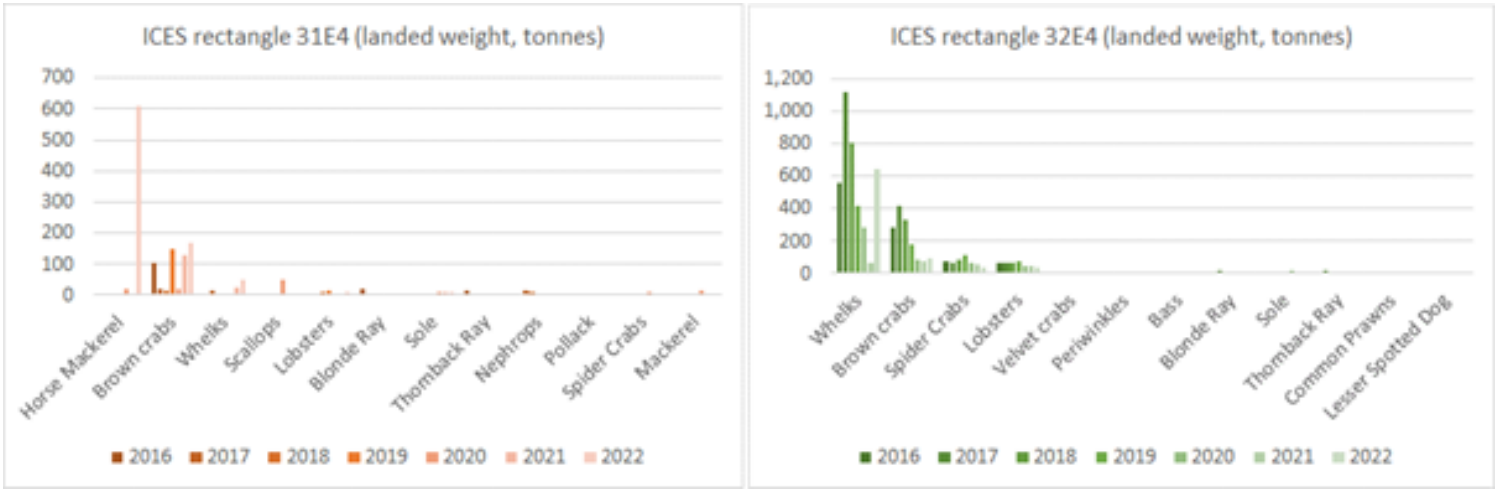

Figure 26.1-6: Key species by annual landed weight (tonnes) (2016 to 2022) from ICES rectangles 31E4 and 32E4 (MMO, 2023)

25. Within the UK exclusive economic zone, fishing activity from the shore to the 6 NM limit is only permissible for UK-registered vessels. Within the 6 NM limit a number of restrictions are in place based on Welsh legislation (e.g., Scallop Order 2010) and byelaws. Beyond the 6 NM limit, foreign vessels may fish in the UK EEZ if they have a valid foreign vessel licence and additionally during the UK-EU Trade and Cooperation Agreement adjustment period, qualifying EU vessels have rights of access for fishing in specific parts of UK waters, including in ICES division 7g[1].

26. Landings data sourced from the EU DCF database indicates that there is likely to be some non-UK fishing activity in the local Study Area (**Figure 26.1-7**). Non-UK vessels which are active in the area include Belgian beam and otter trawlers targeting sole and other demersal species, and French otter trawlers targeting demersal species including blonde rays *Raja brachyura*, haddock *Melanogrammus aeglefinus* and whiting *Merlangius merlangus* (**Figure 26.1-8**). EU landings data also indicates some Irish vessel activity, with otter trawlers targeting *Nephrops norvegicus* and whiting. Across the 2012 to 2016 time series, landings by EU vessels peaked in 2012. The majority of landings by weight were accounted for by rays (11%), whiting (11%), anglerfish *Lophius piscatorius* (11%), haddock (9%) and sole (7%). Mixed demersal species and Nephrops accounted for the remainder of landings.

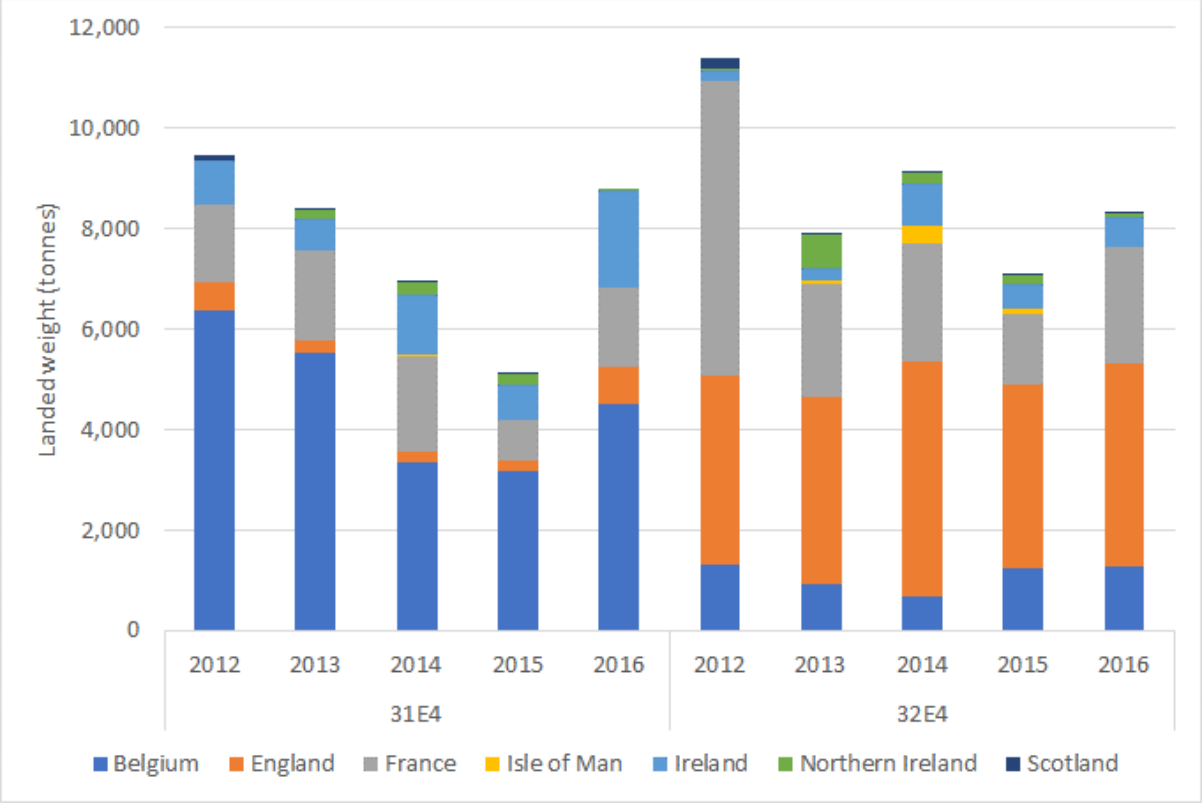

Figure 26.1-7: Average annual landed weight (tonnes) landed by all UK and EU countries from ICES rectangles 31E4 and 32E4 (2012 to 2016) (EU DCF, 2022)[2]

[1] UK domestic fishing vessel access to non-UK waters and foreign vessel access to UK waters is detailed here: United Kingdom Single Issuing Authority (UKSIA) - GOV.UK (www.gov.uk)

[2] Landings by Welsh fishing vessels are not disaggregated within the EU DCF data and are captured within landings attributed to 'ENG' (England).

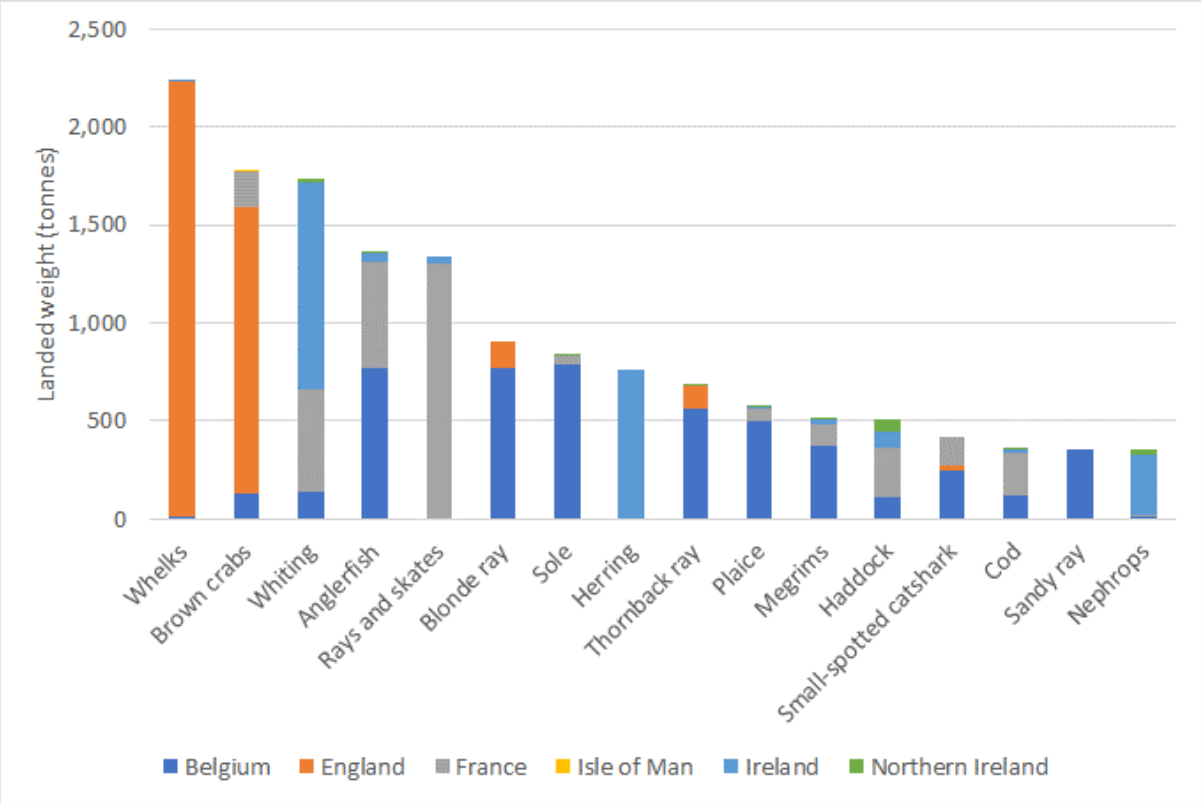

Figure 26.1-8: Average annual landed weight (tonnes) of species landed by all UK and EU countries from ICES rectangles 31E4 and 32E4 (2012 to 2016) (EU DCF, 2022)

26.4 Key Fishing Gears

27. 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.

28. A range of fleets target different fisheries across the Study Area, as indicated by landings statistics for registered vessel nationality and gear type **(Figure 26.1-9**). Across the Study Area, in ICES rectangle 31E4, beam and otter trawl fleets from Belgium, France and Ireland are active. Potting activity in the Study Area is also undertaken, primarily by UK-registered (English and Welsh) vessels, and there may be sporadic pelagic trawl activity. In ICES rectangle 32E4, potting by UK-registered (English and Welsh) vessels dominates, with beam and otter trawl fleets also active but to a lesser extent than in 31E4 (**Figure 26.1-10** and **Figure 26.1-11**).

29. Vessel and gear types within the key fleets and fisheries that operate across the Study Area are described within this section.

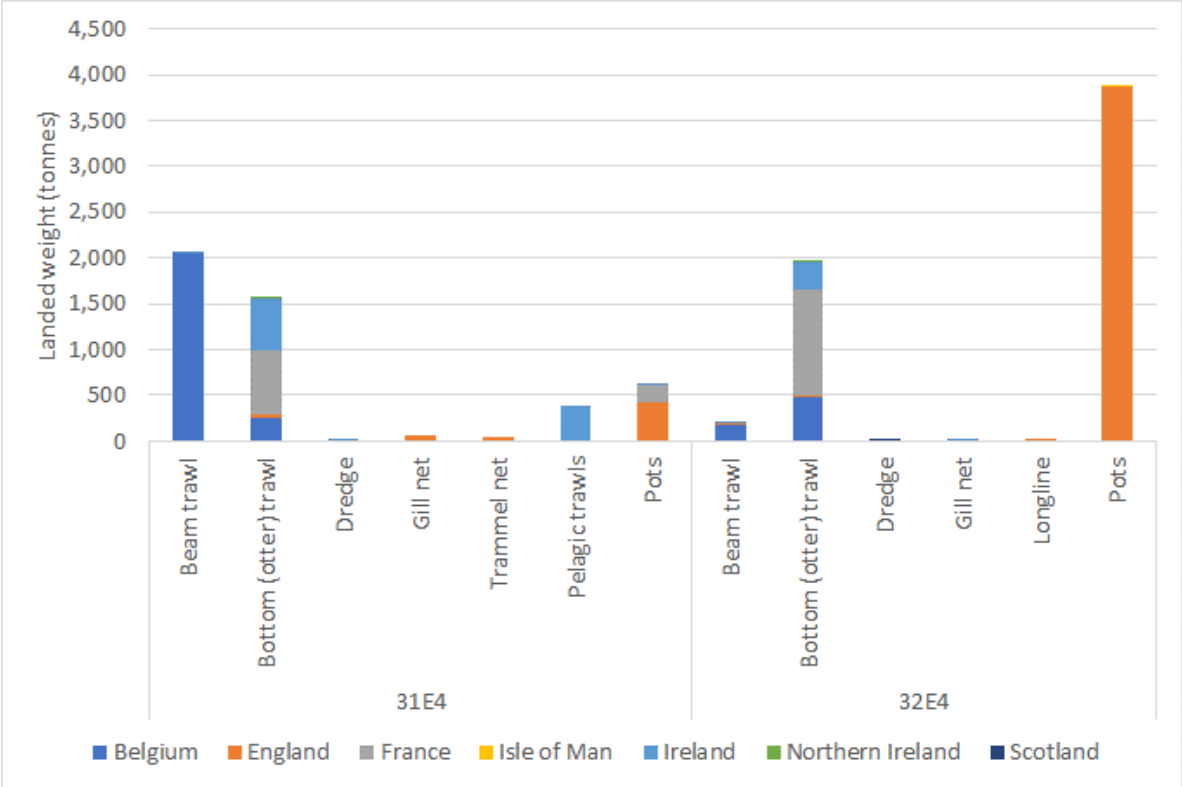

Figure 26.1-9: Landed weight in 2016 by gear type and vessel origin for the Study Area (Data source: EU DCF, 2022)

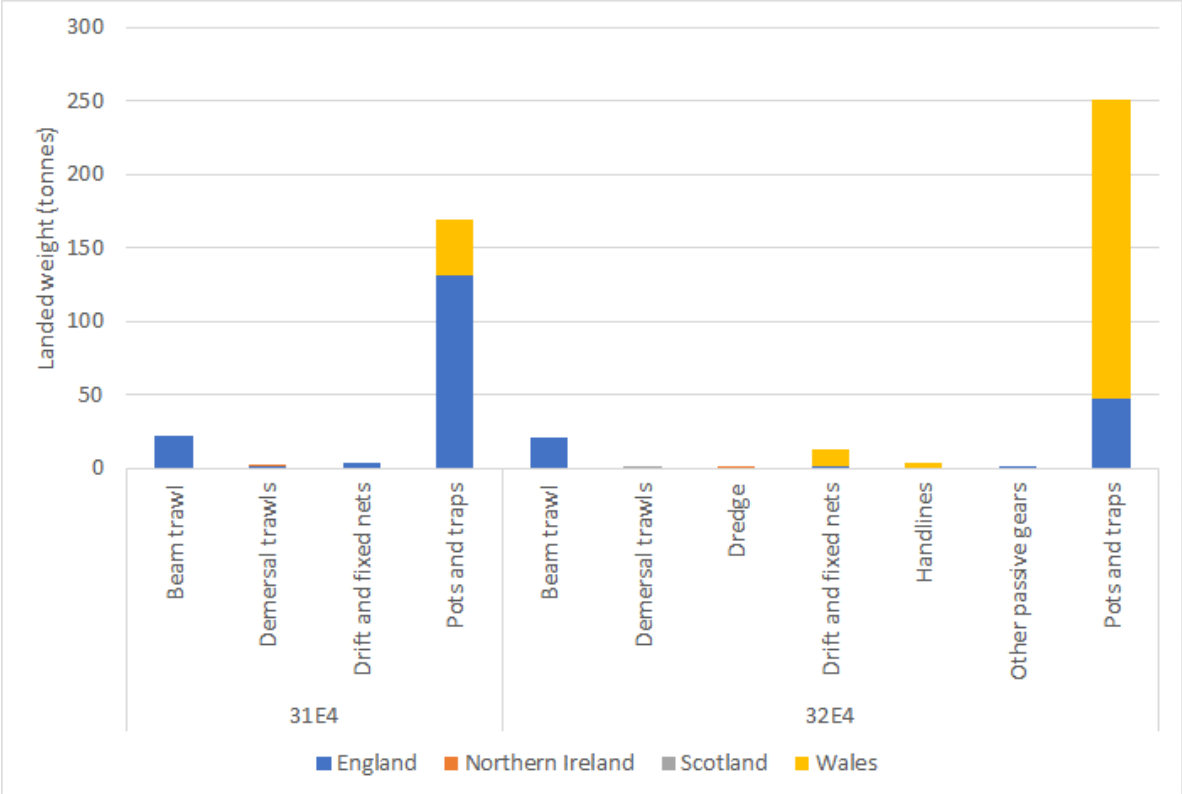

Figure 26.1-10: Landed weight in 2021 by gear type and UK vessel origin for the Study Area (Data source: MMO, 2022)

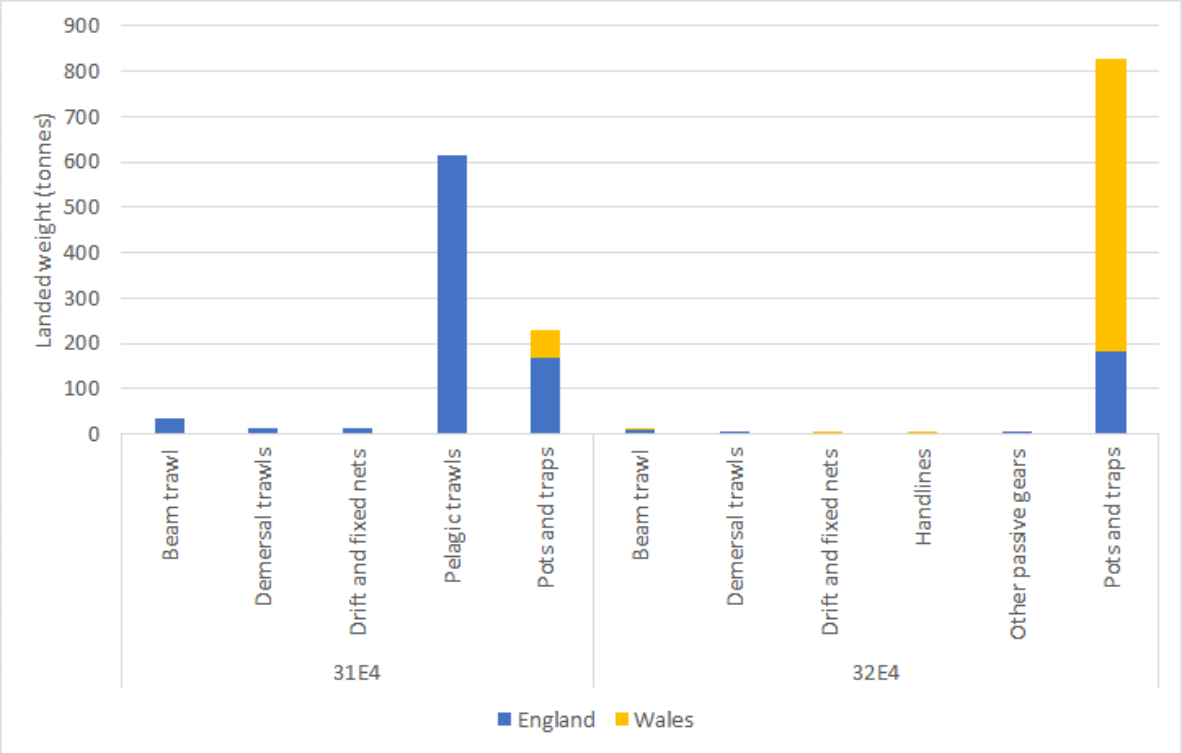

Figure 26.1-11: Landed weight in 2022 by gear type and UK vessel origin for the Study Area (Data source: MMO, 2023)

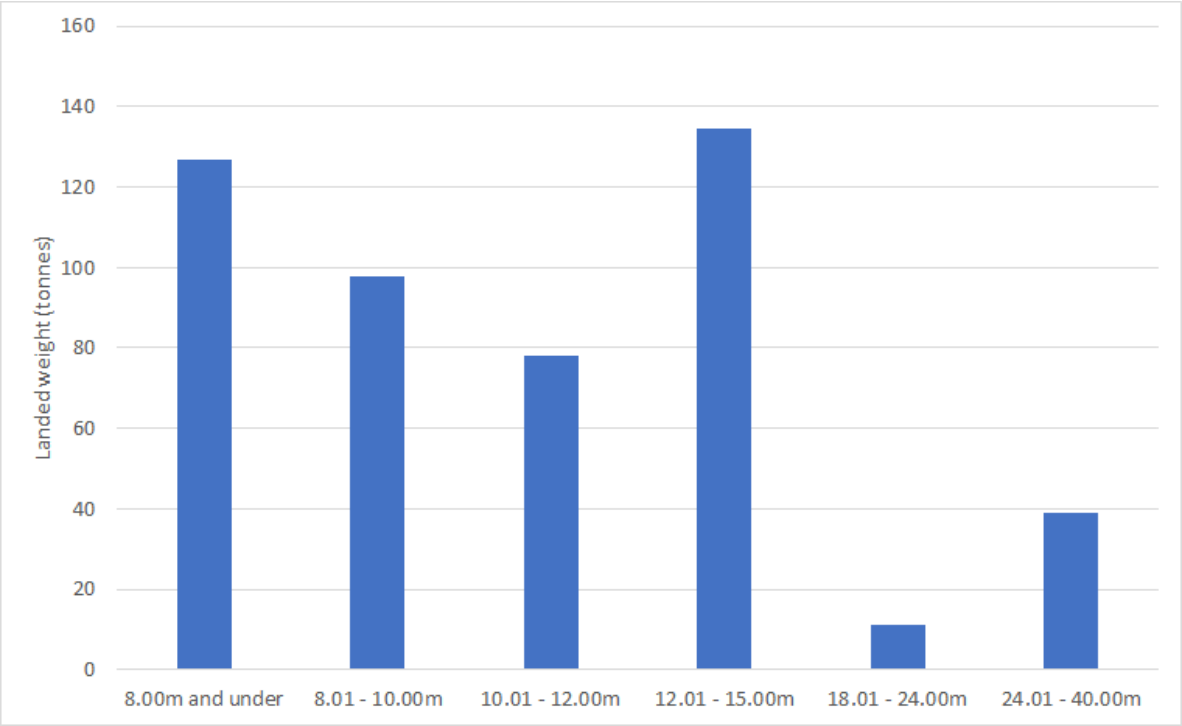

Figure 26.1-12: Landed weight in 2021 by UK vessel length for the Study Area (Data source: MMO, 2022)

Pots and traps

30. Figure 26.1-13 and Figure 26.1-14 show typical potting vessels, gear and the configuration of set pots and Table 26.1-2 describes the profile of potting vessels active across the Study Area.

31. For the capture of whelks, modified, weighted 25 litre plastic drum purpose designed pots are often used. 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 mile, 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 72 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. Bait for the whelk fishery is often crab or dogfish. Large vessels, 'super whelkers', fish year-round offshore.

32. Creels or pots used for the capture of lobsters and crabs and set in a similar configuration as described for whelk pots. 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. The number of pots fished in a location can range from 20 through to hundreds and soak times are typically between 24 and 168 hours. Pots are usually deployed in fleets of 10 to 60 on rocky substrate, though may less frequently be found on other softer substrates.

33. 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.

Table 26.1-2: Profile of typical potting vessels active across the Study Area

Parameter	Indicative details
Main target species	Whelk, brown crab, lobster
Nationality	English, Welsh
Vessel length	Over 10 m (primarily whelk) and under 10 m
Horsepower	60 hp to 350 hp
Typical speed when shooting and hauling gear	0 to 9 knots
Typical soak time	1 to 2 days
Seasonality of activity	Whelk landings peak through spring and summer Brown crab landings peak through summer and autumn Lobster landings peak in summer months
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.

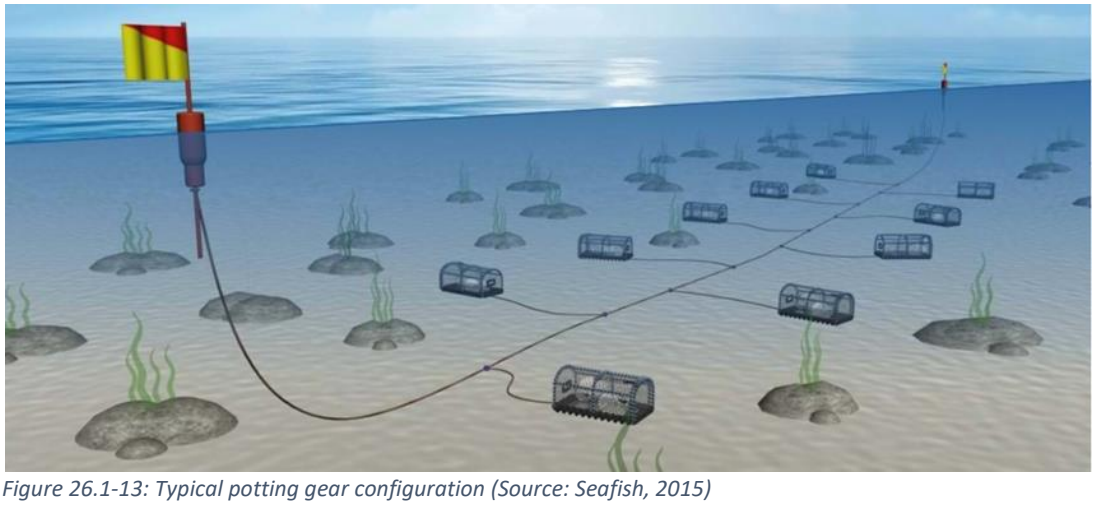

Figure 26.1-13: Typical potting gear configuration (Source: Seafish, 2015)

Figure 26.1-14: Example of potting vessels (Source: MarineTraffic, 2022 and FisherForum, 2023)

Beam Trawl

34. Figure 26.1-15 shows a typical beam trawler and associated gear and **Table 26.1-3** describes the profile of beam trawling vessels active across the Study Area.

35. Beam trawl gear is used to target flatfish such as sole, plaice and rays, which are often somewhat buried in the seabed. Beam trawl nets are held open by a heavy steel beam which is towed along the seabed on a line approximately three times the depth of the water. Some beam trawls include tickler chains, which drag along the seabed in front of the net, disturbing fish in its path and encouraging them to rise into the net. Beam trawls can range in length from 4 m to 14 m and each trawlers tows two beam trawls at a time from derricks on either side of the vessel.

36. Catches with beam trawl form a significant portion of annual landings from the Study Area. Fishing effort for the target flatfish species is spread over a wide area and across various grounds throughout the Celtic Sea.

Table 26.1-3: Profile of typical beam trawl vessel active across the Study Area

Parameter	Indicative details
Main target species	Sole, plaice, rays and mixed demersal species
Nationality	Belgian, English
Vessel length	15 m to 45 m
Horsepower	500 hp to 2,000 hp
Typical towing speed	3.5 to 8 knots
Typical duration of tow / dredge	1 to 2 hours
Seasonality of activity	Peak activity in spring and summer months
Typical gear	Twin beam, occasionally single beams; beam length up to 12 m Each beam weighing <10 tonnes. Chain matting or individual chains attached to underside.

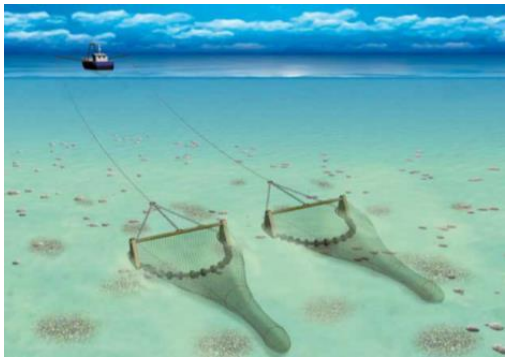

Figure 26.1-15: Typical beam trawler and gear diagram (Source: Seafish, 2015; MarineTraffic, 2022)

Otter Trawl

37. Otter trawling uses a cone-shaped net which is held open by water pressure on two otter boards. The net is towed either across the seabed or within the water column. Fish are herded between the boards into the mouth of the trawl and then forced along a funnel into the end of the net. Net mesh sizes can be altered to target different fish species. Light otter trawling can be conducted by smaller boats using small doors.

38. Within the Study Area, larger Belgian, French and Irish trawlers of up to ~35 m length are active offshore.

39. **Table 26.1-4** shows a typical otter trawler and associated gear and **Figure 26.1-16** describes the profile of otter trawling vessels active across the Study Area.

Table 26.1-4: Profile of typical otter trawl vessel active across the Study Area

Parameter	Indicative details
Main target species	Rays, whiting, haddock, anglerfish, Nephrops
Nationality	French, Belgian, Irish
Vessel length	Over 10 m, typically up to 35 m
Horsepower	300 hp to 850 hp
Typical towing speed	2 to 6 knots
Typical duration of tow / dredge	1 to 2 hours
Seasonality of activity	Year-round, summer/autumn peak
Typical gear	Demersal otter trawl Two trawl doors hold the net open horizontally Various forms of ground gear depending on target species

Figure 26.1-16: Typical otter trawler and gear diagram (Source: Seafish, 2015, MarineTraffic, 2022)

Drift and Fixed Nets

40. Fixed nets include gill, tangle and trammel nets. They are typically used by small inshore vessels which target bass, flounder and rays.

41. The nets are usually fished in groups (or fleets) with the end of each fleet attached by bridles to a heavy weight, or anchor, on the seabed. Each weight, or anchor, is attached to a marker buoy or dhan flag, on the surface, by a length of rope equal to about twice the depth of water. Net lengths can vary significantly; individual nets can vary from 50 m to 200 m. The soak times, the time that a fleet is left fishing for, can range from a six-hour tidal soak up to 72 hours. The nets are shot over the stern of the vessel whilst steaming with the tide and are fished along the direction of the tidal stream, rather than across it (there are some exceptions to this).

42. Smaller vessels under 10 m length are typically engaged in netting and may work both pots and nets (and lines), alternating between gears seasonally. Net catches can provide bait for pots.

Table 26.1-5: Profile of typical netting vessels active across the Study Area

Parameter	Indicative details
Main target species	Bass, turbot, rays
Nationality	English and Welsh
Vessel length	Majority under 10 m
Horsepower	60 hp to 350 hp
Typical soak time	6 to 72 hours
Seasonality of activity	Summer peak
Typical gear	Monofilament nylon net Set on seabed with each end anchored and left to fish

Figure 26.1-17: Typical netter and gear diagram (Source: Seafish, 2015, MarineTraffic, 2022)

Other Gear Types

43. Other gear types which may be actively deployed in the Study Area, but with less frequency than those described above include scallop dredges, handlines and pelagic trawls.

44. Landings data indicates landings of king and queen scallop, primarily of king scallop by English dredgers, with a notable peak in landings from the Study Area in 2020 (51 tonnes, compared to less than 5 tonnes in all other years across the 2016 to 2021 period). This variation in landings may be a reflection of the cyclical pattern in scallop stocks and associated fishing activity, with good grounds considered to rotate during a cycle across several years. Landings data also indicates some use in the Study Area of handlines by Welsh vessels targeting bass (with 3.6 tonnes landed in 2021). EU landings data indicates landings of herring by Irish pelagic trawlers in 2016 only, suggesting such activity in the Study Area is highly sporadic.

26.5 Key Target Species

45. The sub-sections below describe the ecology and stock status of key species targeted commercially in the Study Area. The seasonality of landings of these species is depicted at the end of this section in **Figure** 26.1-18**.**

26.5.7. Key Species Targeted Using Pots and Traps

46. **Brown crab**: Brown crab is a long-lived, large decapod crustacean. Brown crabs are very productive animals, and each female can hatch between 1 and 3 million eggs (Neal & Wilson, 2008). Post larvae are known to settle inshore and juvenile crabs are more common in shallow waters where they remain until they reach a carapace width of 6 to 7 cm (Regnault, 1994).

Adult crabs undertake extensive migrations, which may be associated with their reproductive cycle. Brown crab is found across a wide range of habitat types, ranging from rocky reefs to soft mud and sand. As with lobster, brown crab is caught by pots and have no TACs or quotas in place. Primary management is by the technical measure of a Minimum Landing Size (MLS) of 140 mm carapace width. Cefas has published reports describing the status of the brown crab stocks around the UK since 2012. The latest report states that exploitation levels in the Celtic Sea are moderate for females and likely to be sustainable but notes that the status of the stock of female is approaching the level associated with Maximum Sustainable Yield. There are insufficient data on male crabs to undertake an assessment on this portion of the stock (Cefas, 2020a).

47. **Lobster**: Lobster is a long-lived decapod crustacean. Lobster breed once per year in the summer and newly berried females begin to appear from September to December. Lobsters do not undertake any significant migrations and juveniles in the first three to four years of life may be particularly sedentary. From hatching it takes approximately five to six years for a lobster to recruit to the fishery and be of commercially viable size. Lobsters typically inhabit rocky reef and rough ground, sheltering in crevices between rocks and boulders (Wilson, 2008). The availability of suitable habitat is considered to influence the carrying capacity and size structure of lobster populations (Seitz et al., 2014). Lobsters are caught by pots and there are no TACs or quotas in place. Primary management is by the technical measure of a MLS of 90 mm. Lobster is one of the highest value per kilogram of commercially exploited shellfish species found in UK waters. Cefas has published reports describing the status of the lobster stocks around the UK since 2012. The latest report states that exploitation levels off southwest England (closest assessment area to the proposed Project) is moderate and the stock size is above the minimum reference point but below the Maximum Sustainable Yield (Cefas, 2020b).

48. **Whelk**: Common whelk are a gastropod mollusc that inhabits mixed sediment from the low water markdown to 1,200 m, being most common in 0-50 m water depths (Ager, 2008). Whelk reach reproductive maturity at different sizes depending on their geographical location and environmental conditions. Whelks grow to 150 mm and live for up to 15 years, reaching maturity at 2 to 3 years. European populations are understood to breed from autumn to winter (Kideys et al., 1993). Eggs are fertilised internally and then laid on hard benthic substrata, with juveniles emerging after approximately 3 to 5 months. The life cycle therefore has no pelagic phase, leading to limited dispersal between populations. Whelk are caught using plastic pots, which may be deployed by the same potting vessels that target crab and lobster. Whelk are cleaned and exported to the far east and Europe in a variety of product types, including cooked whole in-shell or meat only, in fresh or frozen forms. The fishery is very dependent on market conditions and prices.

49. Whelk fisheries are one of the largest fisheries in Wales and fishing effort has increased notably in recent years as prices have increased and export to non-EU countries has grown. Fishing for whelk occurs year-round but peaks in spring and winter months, decreasing in summer when some vessels switch from targeting whelk to other species (Rossiter, 2016). Historically no Total Allowable Catch (TAC) or quotas were in place for whelk. In the absence of quota, the Welsh Government has taken steps to introduce management measures to encourage the sustainability of the whelk fishery. The Welsh Whelk Statutory Instrument which was phased in from 2019 introduced an increase in the size at which whelks can be retained and landed, from 45 mm to 65 mm. Whelk permit conditions have recently been introduced by the Whelk Fishing Permit (Wales) Order 2021 (Welsh Government, 2021), and include an authorisation scheme for all vessels taking whelks with pots, an annual limit on the

total amount of whelk that can be taken (4,768 tonnes for the year beginning March 2023), and a flexible monthly catch limit for each authorised vessel.

50. **Spider crab**: The spider crab is a large crab with a circular, convex carapace which is commonly covered in spines and small bumps. They grow up to 80cm in claw span. They can live for up to 40 years and conduct several migrations over the course of their life, moving into overwintering sites offshore at depths of over 50m before returning to their shallow coastal nursery sites in spring and summer (Bangor University, 2023). European spider crab is a commercially valuable species due to the edible white meat found in its legs and claws. Fisheries in the UK (potting and netting) are mostly concentrated around ports in the south-west of England and parts of Ireland, however there is little demand for spider crab among British consumers. Consequently, the majority of British catch are exported to continental Europe. The Undersized Spider Crabs Order 2000 mandates a MLS of 130 mm for male spider crabs and 120 mm for females.

Key Species Targeted Using Trawls

51. **Sole and plaice**: Sole is caught in a mixed fishery with other flatfish, namely plaice, as well as gadoids. Sole is a flatfish and belongs to the family of flatfishes known as Soleidae. It spawns in spring and early summer in shallow coastal water, from April to June in the southern North Sea and from May to June off the coast of Ireland and southern England. The larvae remain in shallow inshore nursery areas such as estuaries, tidal inlets and shallow sandy bays, moving to join the spawning adult population at 2 to 3 years old. Adults are usually found at a depth range of between 10 and 60 m; in winter adults move further offshore and can reach depths of up to 120 m. The juveniles can undertake extensive migrations, although once they reach maturity, will only carry out seasonal migrations from deeper water to shallower spawning habitat (ICES-FishMap, 2005). They can reach 70 cm in length but are commonly between 30 and 40 cm. Catches of sole have declined since the mid-1990s. The latest ICES stock assessment observes that spawning stock biomass has increased since 2007 and is estimated to have been above the maximum sustainable yield trigger point since 2010 (ICES, 2022). Sole are subject to a TAC and technical measures are applicable to the mixed demersal beam-trawl fishery (relevant to both sole and plaice), namely a minimum mesh size of 80 mm. A Minimum Conservation Reference Size of 24 cm is in place. ICES advises that catches in 2023 in the Bristol Channel and Celtic Sea should be no more than 1,338 tonnes.

52. Plaice is a bottom-dwelling flatfish. It spawns in the early months of the year (January to March) and sometimes makes long spawning migrations (ICES-FishMap, 2005). They grow to around 50 to 60 cm in length but have been recorded up to 90 cm. Plaice are most commonly found on sandy seabed but can live on gravel or mud. They are active at night and remain stationary during the day, usually buried within the sediment leaving only the eyes protruding. They have been recorded from between 0 and 200 m depth, but are mostly between 10 and 50 m.

53. The Irish Sea plaice stock is in a healthy state and fishing pressure is low. The TAC in recent years have been set in line with ICES advice, and catches are usually below TACs, owing to limited market demand. ICES advises that catches should be no more than 402 tonnes in each of the years 2023 and 2024 in the Bristol Channel and Celtic Sea.

54. Within the Study Area, landings data indicates that sole and plaice are typically targeted by vessels deploying beam trawl gear.

55. **Whiting:** Whiting *Merlangius merlangus* are widely distributed both inshore and offshore. Whiting are commonly found on mud and gravel bottoms, but also on sand and rock. Whiting spawn between January and July with spikes in their breeding activity during the spring.

Juveniles inhabit inshore nursery areas for their first year and then they migrate to deeper waters offshore (ICES-FishMap, 2005).

56. Whiting is a target species in the Celtic Sea area and is also caught as bycatch in haddock dedicated fisheries. ICES stock assessments indicate that the Celtic Sea whiting stock is at dangerously low levels, below the point at which its ability to reproduce is compromised. There are a number of management measures for this stock, but they appear to have not been effective. Whiting stocks are subject to a TAC, which is set for stock across southern Celtic Seas and western English Channel. ICES advises that catches in 2023 from this stock should be no more than 1,715 tonnes in total. Technical measures applied to this stock are a minimum mesh size (MMS) for beam and otter trawlers in ICES Subarea 7 (southern Celtic Seas and the English Channel) and a minimum landing size of 27 cm.

57. Within the Study Area, landings data indicates that whiting are typically targeted by vessels deploying demersal otter trawl gear.

58. **Nephrops**: Nephrops, also known as the Norway lobster, is a genus of lobsters comprising a single extant species, *Nephrops norvegicus* which are common around most of the British Coasts. They are a small lobster, growing to a maximum total length of 25 cm, are pale orange in colour with a segmented abdomen and broad fan shaped tail and a non-segmented head and thorax. Their first pair of legs are elongated with longitudinal, spiny ridges, with the first 3 pairs of legs having claws. They have 2 pairs of antennae and the second pair much longer and thinner than the first. Nephrops are found throughout the muddy substrata of the seafloor, mostly between depths of between 200 to 800 m but considerable populations can be found at depths less than 200 m. They live in shallow burrows and are common on seabed with fine cohesive mud which is stable enough to support their unlined burrows.

59. Nephrops in the Study Area are principally targeted across a fishing ground referred to as the Smalls; this stock is mainly fished by vessels from Ireland, France, and the UKw. Nephrops stock abundance is understood to have been declining in this area since 2017, but catches are below the level associated with Maximum Sustainable Yield. Nephrops are subject to TAC limits, set for the whole of the Celtic Seas; ICES advises that catches from the Celtic Seas should be no more than 1,803 tonnes in 2023. There is a Minimum Conservation Reference Size of 25mm in the Celtic Seas.

60. Two Fishery Improvement Projects are operating relevant to the Celtic Sea: Project UK (running until 2024), and the Irish Prawn FIP (running until 2025). Both are looking to reduce bycatch and implement better management in their respective fleets.

61. Within the Study Area, landings data indicates that Nephrops are typically targeted by vessels deploying demersal trawl gear.

62. **Thornback ray**: Thornback rays *Raja clavata* or Roker belong to the Rajidae family of skates and rays. Thornback rays have been described as showing philopatric behaviour (tendency of a migrating animal to return to a specific location in order to breed or feed). Females can grow to 118 cm in length and 18 kg in weight, while males can reach 98 cm in length. Thornback ray frequents a wide variety of grounds from mud, sand, shingle to gravel. It may be found to a depth of 300 m but is most common between 10 and 60 m (ICES-FishMap, 2005). Although mainly a non-migratory species, the fish often moves close inshore during the spring. Common around the north Wales coastline, it is the most abundant ray in inshore waters. Information on the status of the stock is limited but there is currently no concern overfishing pressure. Skates and rays are managed under regional TACs which are applied to a group of species, rather than individual skate and ray species. Thornback rays are targeted seasonally or as

bycatch in trawl and gillnet fisheries. ICES advises that landings should be no more than 1,833 tonnes in each of the years 2023 and 2024 (ICES, 2022).

63. **Blonde ray**: The blonde ray *Raja brachyura* is a large skate species with a patchy distribution across the UK; knowledge of its stocks is not good enough to accurately predict the state and population distributions across the UK. The blonde ray has a flattened, kite shaped body with broad, wing-like pectoral fins. Its upper body is covered in prickly spines and is usually a dark or sandy brown colour with a spotted pattern that reaches the edge of the body disc, whilst the underside is a pale white. The species can grow to a maximum of 120 cm, with the average size being between 40 and 100 cm. Blonde rays live along the seafloor from inshore waters to depths of over 100 m offshore. Typically, they prefer areas of soft substrata such as sandy banks, where its body can camouflage against the seabed, allowing it to hide from predators and to ambush prey.

64. Like all rays the blonde ray is a slow growing species that are not sexually mature until the ages of 8 to 10. Females produce between 40 to 140 eggs per year, between the months of February and August, using shallow coastal waters as nursing-grounds. This slow growth rate and slow reproduction leaves the rays particularly vulnerable to over-exploitation from fishing as it takes a very long time for populations to re-build after exploitation. Within the Study Area, rays are typically caught as bycatch in in beam trawls, demersal trawls and gill nets. Until recently species level identification when recording skate landings was not conducted and ICES states that stock levels are unknown and fishing effort is considered to be above recommended levels. ICES advises that when the landings should be no more than 573 tonnes in each of the years 2023 and 2024 (ICES, 2022).

65. **Monks or Anglers**: Monkfish refers to any large bottom-dwelling anglerfish of the genus Lophius, with the two main species landed in UK waters being the white monkfish *Lophius piscatorius* and the black bellied monkfish *Lophius budegassa*. In the UK monkfish are also referred to as Anglerfish, however anglerfish refers to any fish of the bony fish order *lophiiformes* and so the two should not be confused together.

66. Monkfish are slow moving bottom dwelling fish species that are easily recognisable by their distinctive features; a depressed head and body, wide mouth and a fleshy growth or lure at the end of the first dorsal spine. This growth can be wiggled to lure prey towards the mouth of the fish. The species typically grow to around 200 cm long and are usually brown in colour with a white underside, with the skin itself being loose and scaleless. They can be found in coastal waters all around Britain and Ireland, from the low intertidal down to depths of 550 m with individuals migrating to depths of 2,000 m offshore to spawn. These fish are most commonly found half buried and concealed in sandy or muddy sediments, where they lie camouflaged to ambush prey, but they can also be found on gravel and rocky areas. (Fariña et al 2008). Monkfish are a long-lived species, females mature at around 9 to 11 years and males at around 6 years with the species being known to live up to 24 years.

67. Although commercial trawlers may not specifically target monkfish, they are a welcome trawl bycatch or component of mixed fisheries. The latest ICES advice for monkfish indicates that overall stocks are above sustainable levels. There is no minimum landing size for monkfish. ICES advises that catches of *Lophius budegassa* in 2023 should be no more than 23,436 tonnes and of *Lophius piscatorius* should be no more than 34,540 tonnes (ICES, 2022).

68. **Haddock**: Haddock *Melanogrammus aeglefinus* is a member of the cod-like fish family and is found throughout British and Irish waters. Haddock range in size from up to 1 to 3 feet in length, and weigh up to 2 to 40 pounds, with a lifetime of up to 10 or more years (ICES-FishMap, 2005).

69. Haddock in the Southern Celtic Seas and English Channel is not considered to be overfished. Haddock are subject to a TAC, though it is noted that from 2016 to 2020, catches averaged 179% of TAC limits indicating poor enforcement of this management measure. There is a Minimum Conservation Reference Size of 30cm in the Celtic Seas. Below this size, haddock must be landed but can't be sold for human consumption, meaning they are less valuable. Under the EU Landings Obligation and UK law, it is illegal to discard unwanted (e.g., undersized or over-quota) haddock at sea. ICES advises that catches in 2023 in the southern Celtic Seas and English Channel should be no more than 11,901 tonnes; a reduction from previous years advice resulting from a downward revision in estimated stock size and low recruitment (ICES, 2022).

70. **Pollack**: Pollack *Pollachius* is a large fish growing up to 130 cm in length. This species can be found to >100 m water depth, either solitary or in small shoals. It is both an offshore pelagic or coastal benthic species found on the seabed around rocks, wrecks and kelp forests. Spawning typically occurs between January and April with juveniles living in shallower coastal waters before moving to deeper waters as they grow (Wheeler, A., 1969). There is limited data on the status of pollack in the region. The latest ICES advice suggests that fishing pressure does not seem to be a concern, but that stock biomass may be declining, and recommends precautionary catch limits (ICES,2021e). Pollack are subject to a TAC, with catches typically well below agreed TAC levels. Commercial catches of pollack have historically declined since the late 1980s. In the Study Area, landings of pollack using hook and line methods notably increased in 2020 to approximately 3,900 tonnes. Between 2016 and 2019, annual average landings were substantially lower, at approximately 400 tonnes.

Key Species Targeted Using Other Gear Types

71. **Scallops**: King scallop are most common in water depths of 20 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 to between 10 to 15 years and reach reproductive maturity between 3 and 5 years, at a size of 60 mm; the average maximum size is 160 mm. Recruitment is usually unpredictable as it depends not only on successful spawning and larval production but also on retention of larvae or transport of larvae into areas which are suitable for settlement. Larvae are pelagic with settlement in a particular area somewhat unpredictable leading 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.

72. Main king scallop beds around the English and Welsh coastline have been identified by Cefas (Defra and Welsh Government, 2023). These beds do not overlap with the commercial fisheries Study Area. Bangor University has conducted eight scallop research surveys in Welsh waters since 2012 (Delargy et.al., 2019), thought these are focused in waters to the north of the Study Area. The aim of the surveys was to gather information on the distribution, abundance and population dynamics of king scallop populations in Welsh waters, with the additional aim of conducting stock assessments to assess stock sizes and provide advice to management on the status of Welsh scallop stocks. Latest reporting notes that king scallop populations in Liverpool Bay and the Llyn remain at low densities, but are dominated by larger, older individuals with little or highly sporadic recruitment occurring. The report concludes that a longer data time series is required to better quantify all this information in stock assessment models.

73. There are no TACs 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 either 100 mm, 110 mm (in the south Irish Sea) or 120 mm (used locally by agreement), and a cap on the level of effort (kWdays) that vessels ≥15 m can utilise in ICES area 7 by the Western Waters agreement (EC 1415/2004). King scallop fisheries in Wales are more strictly regulated than anywhere else in the UK. In addition to the above restrictions, and specific closed areas (e.g., Cardigan Bay), no scallop fishing is allowed within 1 mile of the shore and dredging between 1 and 3 miles is only permitted by boats less than 10m in length and towing no more than 6 dredges in total. Within 3 to 6 miles and 6 to 12 miles respectively, totals of 8 and 14 dredges are allowed. Furthermore, all scallop dredgers in Wales must carry and use working satellite VMS.

74. **Bass**: Bass *Dicentrarchus labrax* are a streamline bodied fish with a large head and mouth. Bass breed from February to May in the English Channel and eastern Celtic Sea. It is a long-lived and slow growing species. Juveniles use inshore sheltered areas as nursery grounds, particularly for their first few years. Once mature, bass may migrate within UK coastal waters and occasionally further offshore. It is a long-lived and slow growing species – up to 30 years of age – and can achieve a length of up to 1 m with a weight of 12 kg.

75. Bass spawning stock biomass has historically declined since 2005, showing signs of slow increase in recent years (ICES, 2022), and fishing pressure has been reduced by a series of management measures. Bass are not subject to EU TACs or quotas. In Welsh waters, commercial fishing for bass is subject to seasonal restrictions (e.g., it was prohibited in February and March over the past several years) and limits on catches by various fishing gear types (e.g., in 2023 a vessel using hook-and-line methods can land up to 5.95 tonnes of bass per year, and a vessel using fixed gillnets can land 1.5 tonnes per year). In summary, the stock is at a small size but fishing pressure is currently within sustainable limits.

76. Bass fisheries often have two distinctive components; an offshore fishery on pre-spawning and spawning seabass during winter months, and small-scale inshore fisheries catching mature fish returning to coastal areas following spawning and in some cases immature seabass. The inshore fisheries include small (10 m and under) vessels using a variety of fishing methods (e.g., trawl, handline, nets, rod and line). The fishery may either target seabass or take them as a bycatch with other species. The fishery may either target seabass or take them as a bycatch with other species. ICES advises that total removals (both commercial and recreational catches) in 2023 should be no more than 2,542 tonnes across the central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea (ICES, 2022).

77. **Pollack:** Pollack *Pollachius pollachius* is a large fish growing up to 130 cm in length. This species can be found to >100 m water depth, either solitary or in small shoals. It is both an offshore pelagic or coastal benthic species found on the seabed around rocks, wrecks and kelp forests. Spawning typically occurs between January and April with juveniles living in shallower coastal waters before moving to deeper waters as they grow.

78. There is limited data on the status of pollack in the region. The latest ICES advice suggests that fishing pressure does not seem to be a concern, but that stock biomass may be declining, and recommends precautionary catch limits (ICES, 2022).

79. Pollack are subject to a TAC, with catches typically well below agreed TAC levels. Commercial catches of pollack have historically declined since the late 1980s. In the Study Area, landings of pollack using hook and line methods notably increased in 2020 to approximately 3,900 tonnes. Between 2016 and 2019, annual average landings were substantially lower, at approximately 400 tonnes.

80. **Turbot**: Turbot *Psetta maxima* are a species of large, rounded flatfish that are widespread throughout British waters. The species grow to an average size between 50 to 80 cm in length and have been recorded over 1m in length. The turbot is usually found on sandy or muddy seabed at depths of around 20 m to 80 m, however they are also present on gravel and areas of mixed sand or rock if a food source is present.

81. Turbot is caught by both nets and trawls in the Study Area. Little is known about their stock status, though they are considered a relatively rare species. Management measures are limited.

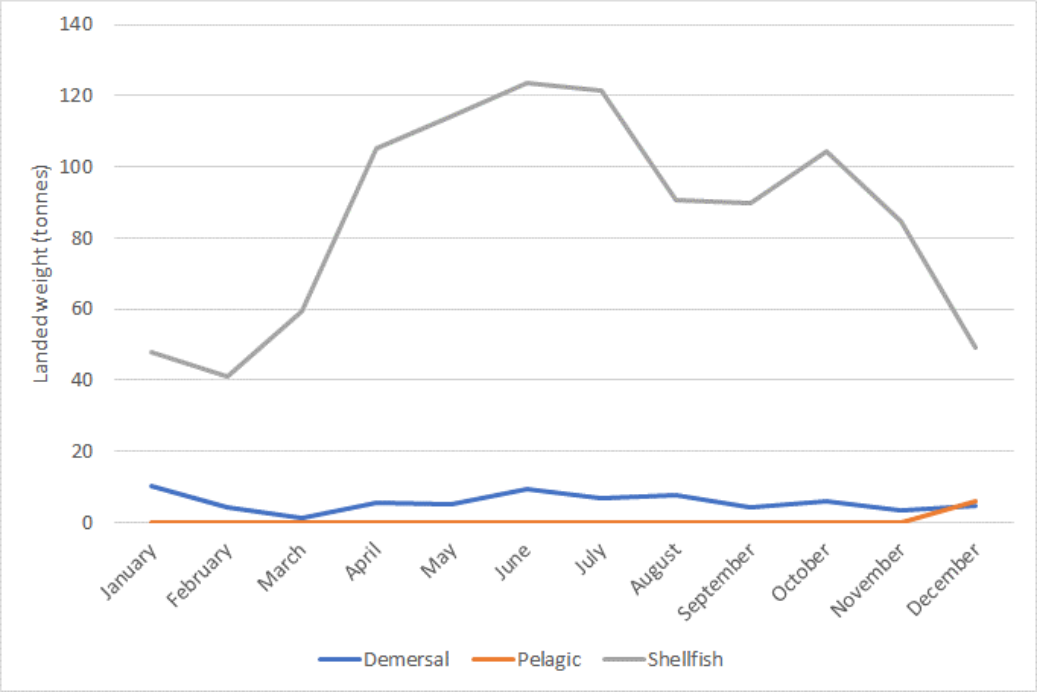

Figure 26.1-18: Seasonality of landings of shellfish, demersal and pelagic species by UK vessels based on average landed weight (tonnes) 2016 to 2021 from the Study Area (MMO, 2022)

26.6 Fishing Restrictions

26.6.8. Total Allowable Catch (TAC) and Quotas

82. As per EU Council Regulations, TACs and quotas are in place for many commercial fish species based on their stock distribution across ICES Divisions. The TACs set for a species across ICES Division 7 (Celtic Seas) for example, allow countries that have been allocated a quota from this TAC to fish within ICES Divisions 7 a to k. TACs and quotas per country are presented in **Table 26.1-6** for key species landed from the commercial fisheries Study Area.

Table 26.1-6: Total allowable catch (TAC) and quotas in tonnes by country for the key species landed in the Study Area in 2022 (EU, 2022)

Species	ICES Division	TAC (tonnes)	Netherlands	Belgium	France	Ireland	UK	Germany	Spain
Anglerfishes	7	9,531	-	840	5,392	689	2,074	94	334
Haddock	7b-k, 8, 9 and 10	3,597	-	38	2,192	729	63	-	-
Whiting	7b, 7c, 7d, 7e, 7f, 7g, 7h, 7j and 7k	8,352	33	63	3,959	3,328	969	-	-
Nephrops	7	4,507	-	-	991	1,503	1,768	-	245
Plaice	7f and 7g	432	-	89	161	60	122	-	-
Pollack	7	2,357		69	1,580	168	536		4
Skates and rays	6a, 6b, 7a-c and 7e-k	2,419	1	208	932	300	713	3	251
Sole	7f and 7g	347	-	206	21	10	110	-	-

Byelaws, Technical Measures and Spatial Closures

83. In addition to limits on catch volumes, a number of restrictions are in place based primarily on fisheries byelaws, intended to protect fish stocks and their habitats. These restrictions include limits on minimum landings sizes, technical measures relating to fishing gear design and use, limits on fishing effort, and temporary and permanent fishery closures.

84. Within the Study Area several spatial restrictions are in place. These include an MMO closed area for the conservation of cod - From 1 February to 31 March each year, it is prohibited to conduct any fishing activity in the following ICES statistical rectangles: 30E4, 31E4, 32E3. It shall be permitted to conduct fishing activities using pots and creels within the specified areas and time periods, provided that no fishing gear other than pots and creels are carried on board. Directed fishing for small pelagic species with towed gear with a mesh size less than 55 mm shall be permitted.

85. A number of technical measure byelaws are in place that are also relevant to fishing activity in the Study Area. These include:

- Welsh Government Scallop Order 2010: Pembrokeshire - Fishing for, taking or killing of scallops by the use of a scallop dredge by British fishing boats is prohibited in this area. No person is to fish for, take or kill scallops in Welsh waters during the period 1 May to 31 October inclusive in each year by any means, including diving; and
- Welsh Government Byelaw 39 Beam Trawl Restriction - No person shall use in fishing for sea fish any beam trawl whereof the effective length of beam exceeds 4 m unless with the prior written authority of the Director of the Committee and in accordance with any conditions therein.

26.7 Activity Assessment

26.7.9. Fishing Intensity Based on VMS data

86. VMS data sourced from ICES[3] 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 (**Figure 26.1-19**). Surface SAR indicates the number of times in an annual period that a demersal fishing gear makes contact with (or sweeps) the seabed surface. VMS data sourced from the MMO displays the value of catches for UK registered vessels 15 m and over in length.

87. Surface SAR provides a proxy for fishing intensity and has been analysed to determine an average annual SAR based on data from 2016 to 2021 for the following gear types:

- Otter trawl (Figure 26.1-20Figure 26.1-20);
- Dredge (Figure 26.1-26);
- Demersal Seine (Figure 26.1-23);
- Beam trawl (Figure 26.1-29).

88. SAR data indicates that the array area is located to the east of key fishing grounds, namely the Smalls Nephrops ground where trawl activity is substantial. There is limited otter trawl activity in the array area, but evidence of some otter trawl activity along the central portion of the offshore export cable corridor between the 6 NN and 12 NM limits, likely to be associated with European – primarily French – trawlers. The equivalent data for dredge activity indicates very limited potential for dredging within the proposed Project boundaries, with potential for some activity in the nearshore portion of the offshore export cable corridor. Demersal seine activity is focused to the west of the proposed Project area with no activity noted inside of or immediately adjacent to proposed Project boundaries. SAR data indicates widespread beam trawl activity across the Study Area, with low levels of activity across the offshore export cable corridor and more notable beam trawl activity outside of 12 NM and across the array area, in particular in its south-east portion. This beam trawl activity is expected to be associated with EU – primarily Belgian – beam trawlers.

89. VMS data sourced from MMO displays the first sales value (£) of catches and covers UK registered vessels 15 m and over in length from 2016 to 2019 for the following gear types:

- Demersal otter trawl (Figure 26.1-21 and Figure 26.1-22);
- Netting (Figure 26.1-24 and Figure 26.1-25);
- Dredge (Figure 26.1-27, Figure 26.1-28 and Figure 26.1-35);
- Beam trawl (Figure 26.1-30 and Figure 26.1-31);
- Potting (Figure 26.1-32 and Figure 26.1-33).

90. VMS data for UK vessels indicates that, in line with SAR data, key fishing grounds are located to the west of the proposed Project boundaries where a Nephrops fishery is present. Data suggests some, sporadic UK otter trawl activity across the offshore export cable corridor between the 6 NM and 12 NM limits. VMS data indicates some UK beam trawl activity within the Study Area, and within the proposed Project boundaries this is focused on the offshore export cable corridor between 6NM and 12 NM. Equivalent data for potting indicates potting activity by larger vessels across the Study Area, including in the array area and along the offshore export cable corridor, with vessels primarily targeting whelk. VMS data sourced from

[3] Note that UK VMS data presents information on fishery value, whereas ICES VMS data presents 'swept-area ratio', which is the cumulative area contacted by a fishing gear within a grid cell over an annual period.

both the MMO and Welsh Government indicates that UK dredge activity is absent within the proposed Project boundaries. VMS data indicates limited netting activity associated with larger vessels within the proposed Project boundaries.

Fishing Intensity Based on AIS Data

91. Fishing vessel route density, based on vessel Automatic Information System (AIS) positional data is shown in **(Figure 26.1-34**) AIS is required to be fitted on fishing vessels ≥15 m length. The data is specific to fishing vessels and indicates the route density per square km per year. This data does not distinguish between transiting vessels and active fishing but does provide a useful source to corroborate fishing grounds. Data indicates sustained fishing vessel traffic by vessels 15 m and above in length, across the Study Area, with peaks in vessel traffic present in 2020 across the central portion of the offshore export cable corridor and within the southern extent of the array area.

Fishing Intensity Based on Marine Traffic Survey Data

92. Project-specific marine traffic survey was undertaken in summer 2021 and winter 2022 (See **Volume 3, Chapter 25: Shipping and Navigation** for additional detail), using AIS and radar tracking and visual observations to record vessel activity across the array area.

93. During the summer survey, approximately four to five fishing vessels per day were recorded in the wider survey area. Fishing vessels were seen engaged in fishing activity. Vessels were primarily to the south of the array area with limited activity in the array area.

94. During the winter survey, two fishing vessels were recorded in the wider survey area, one in transit and one engaged in fishing activity to the north-west of the array area.

Fishing Activity Based on Fishing Gear Observations During Surveys

95. Project-specific geophysical survey was conducted in 2022. During the survey, observations of static fishing gear markers were recorded from the survey vessel. Gear owners were identified and engaged with. A small number of observations were recorded, with potting gear deployed by five fishing vessels identified. Due to the small number of observations, the locations of gear have not been plotted and shown in this report for reasons of confidentiality.

Fishing Activity Based on MMO Surveillance Data

96. Aerial surveillance records supplied by the MMO for the period 2013 to 2017 indicate that in offshore ICES rectangle 31E4 in which the array area are located, the majority of observations were of beam trawlers, with smaller numbers of observations of potting vessels and scallop dredgers. Belgian vessels accounted for the majority of observations, with UK and French vessels also observed. Patrol vessel surveillance sightings from the same rectangle broadly align with this pattern with the majority of observation records being of trawlers and observed vessels originating from Belgium, the UK, Ireland and France.

97. In inshore ICES rectangle 32E4 in which the offshore export cable corridor is located, surveillance observations were, on the whole, less in number than those recorded in 31E4. Observations were comprised entirely of trawlers and potting vessels. Observations of UK vessels dominated, with Belgian, French and Irish vessel presence also recorded. Patrol vessel surveillance sightings from the same rectangle broadly align with this pattern with the majority of observation records being of UK-registered vessels and by far the majority of observations being of potting vessels, with lower numbers of records of trawlers, dredgers and netting vessels, and vessels using hook and line gear.

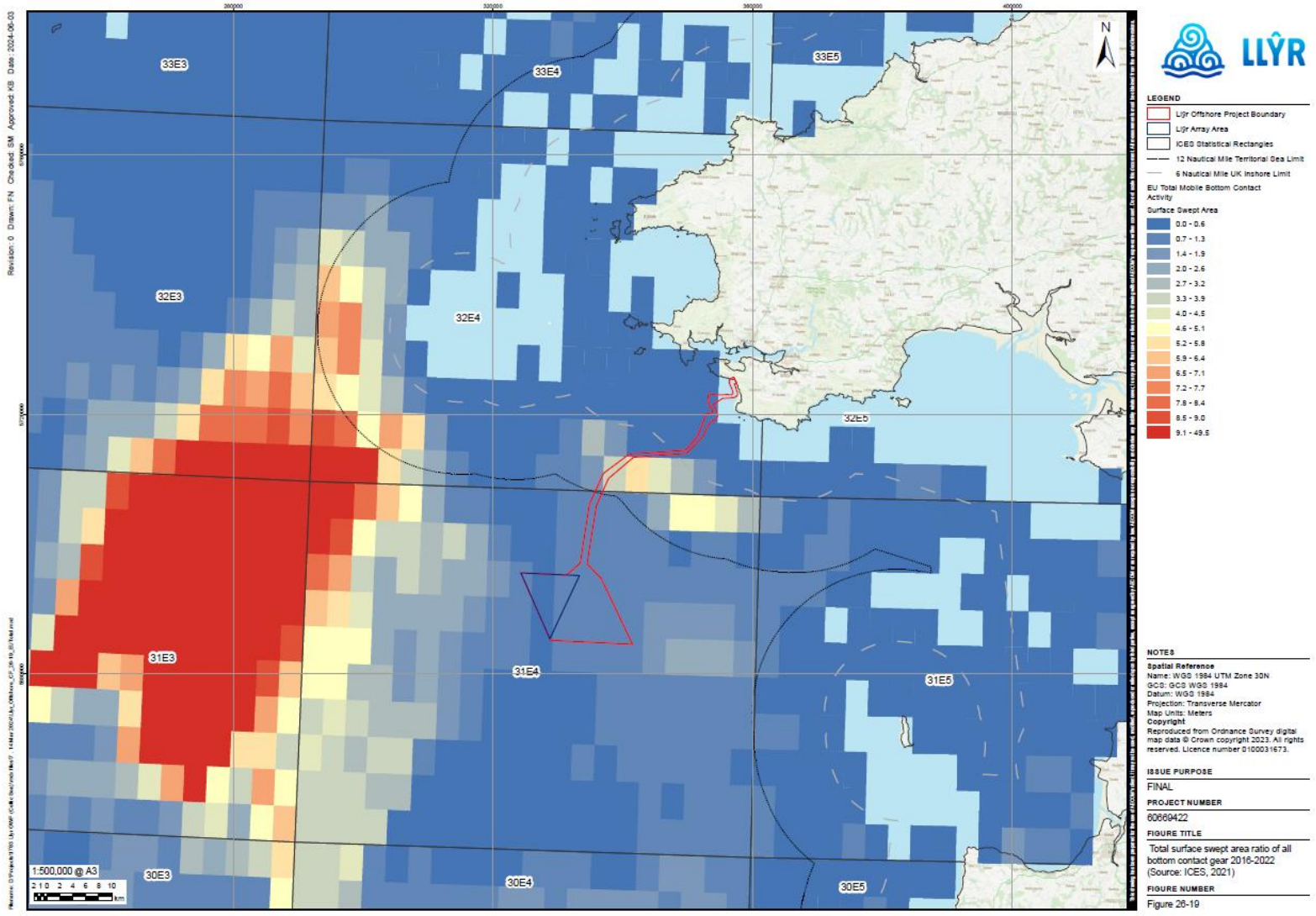

Figure 26.1-19: Total surface swept area ratio of all bottom contact gear 2016-2022 (Source: ICES, 2021)

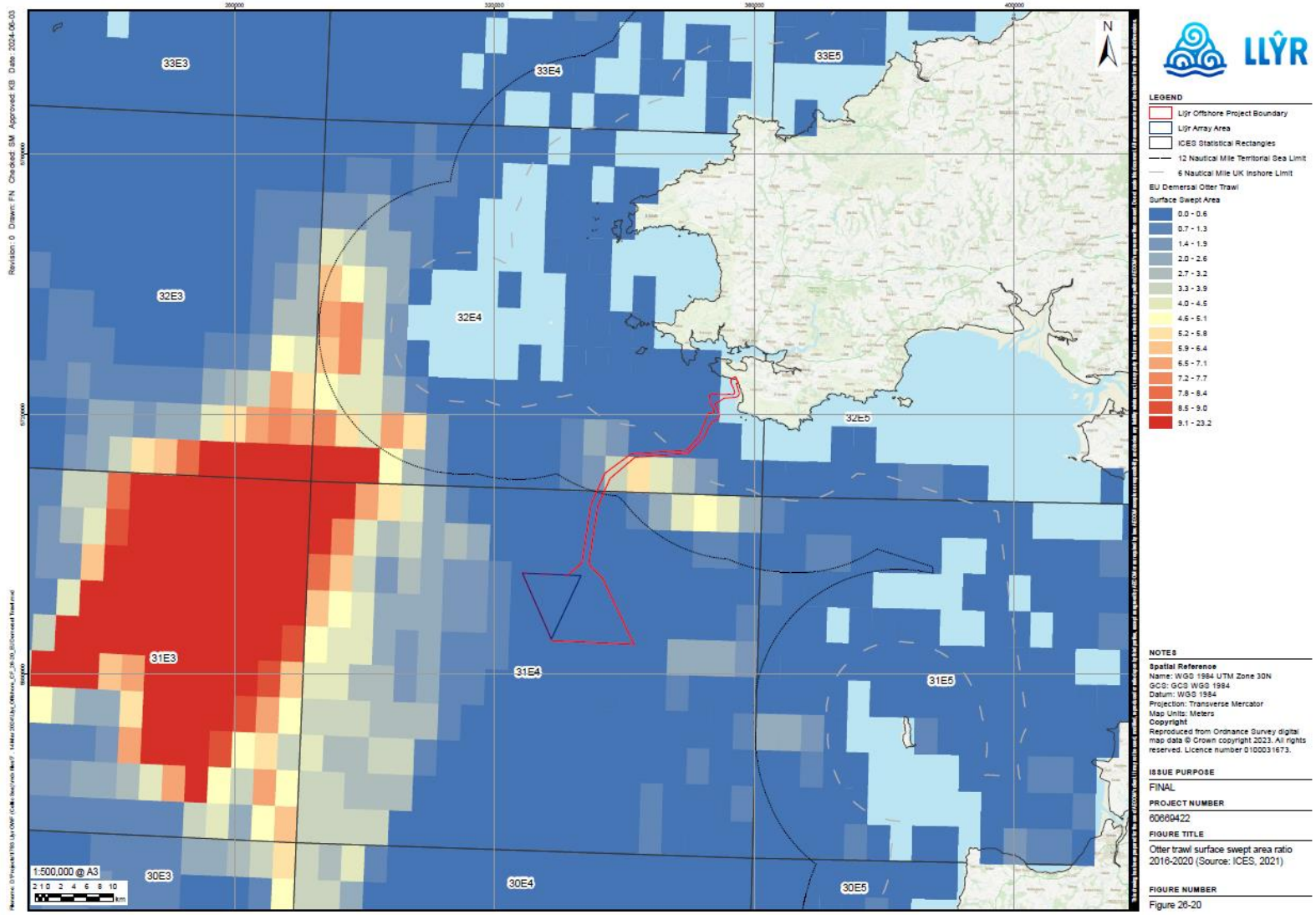

Figure 26.1-20: Otter trawl surface swept area ratio 2016-2020 (Source: ICES, 2021)

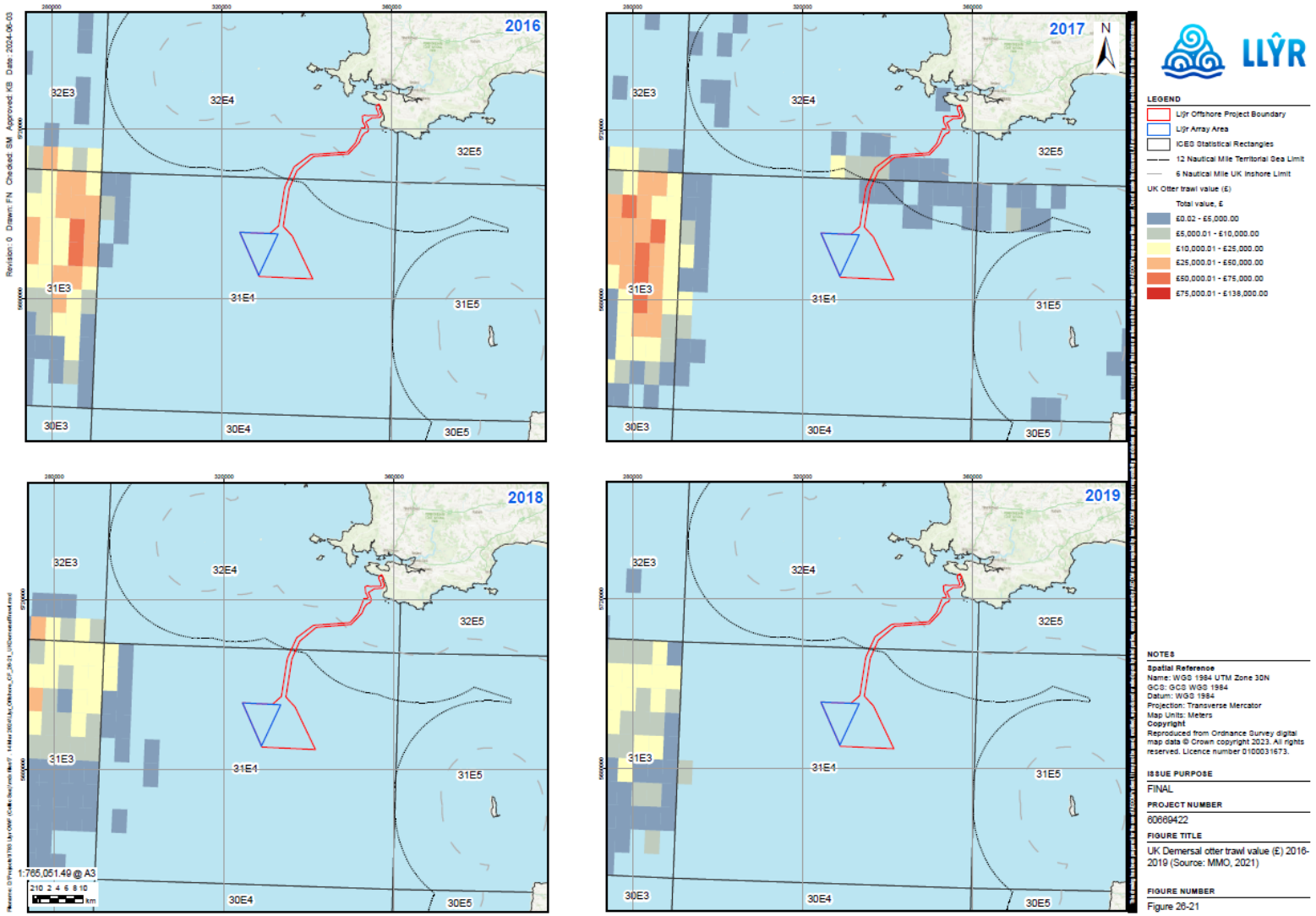

Figure 26.1-21: UK Demersal otter trawl value (£) 2016-2019 (Source: MMO, 2021)

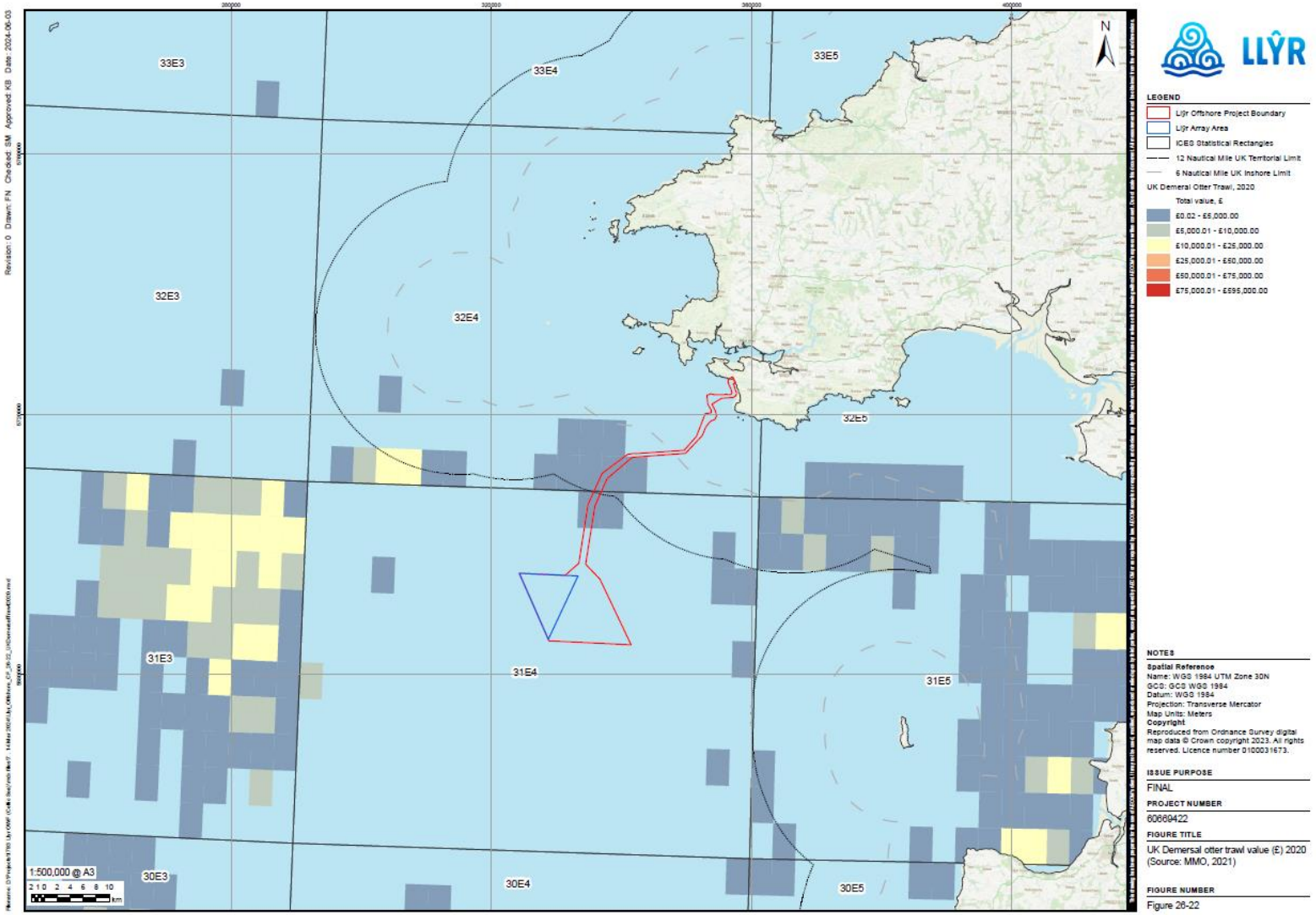

Figure 26.1-22: UK Demersal otter trawl value (£) 2020 (Source: MMO, 2021)

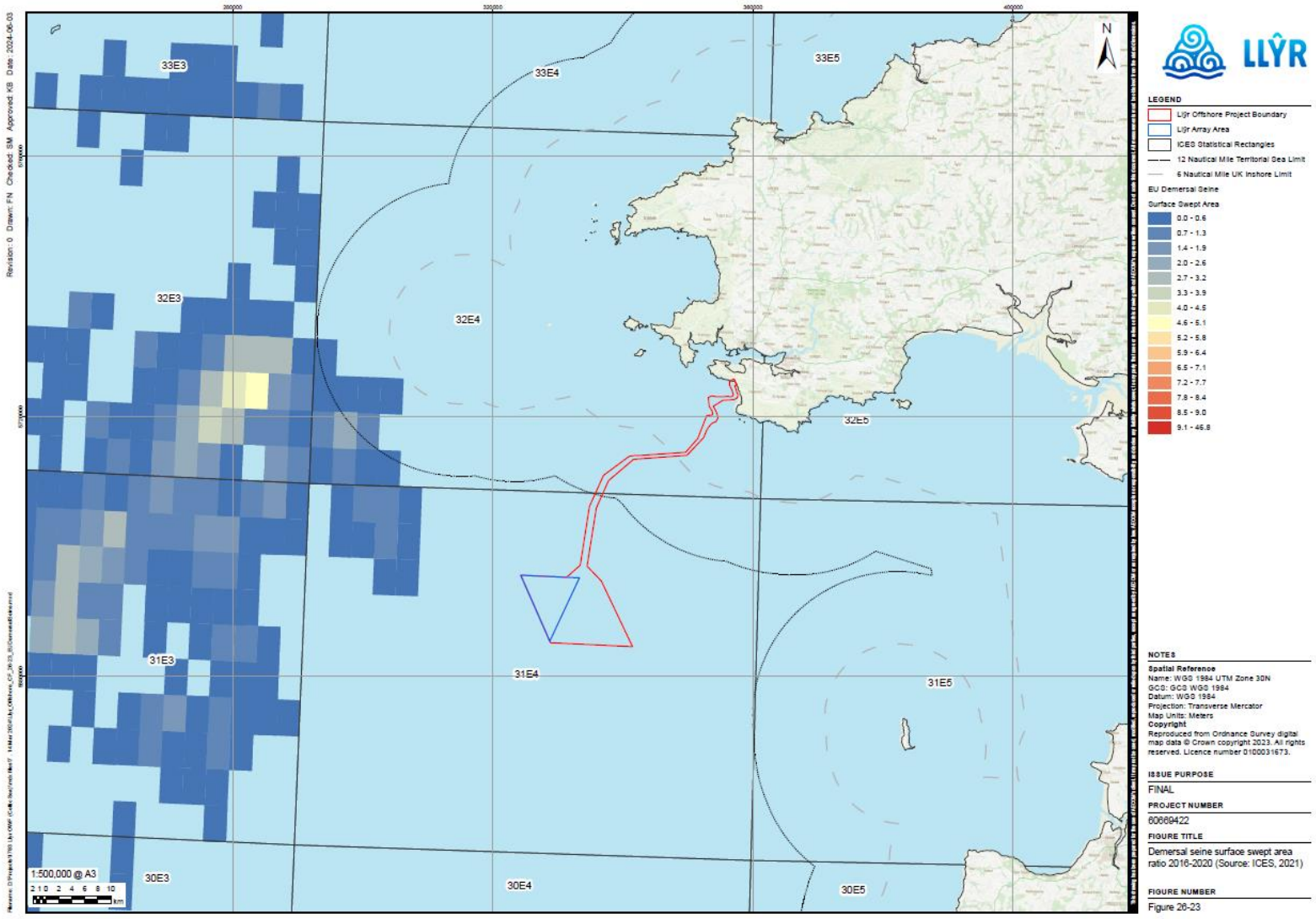

Figure 26.1-23: Demersal seine surface swept area ratio 2016-2020 (Source: ICES, 2021)

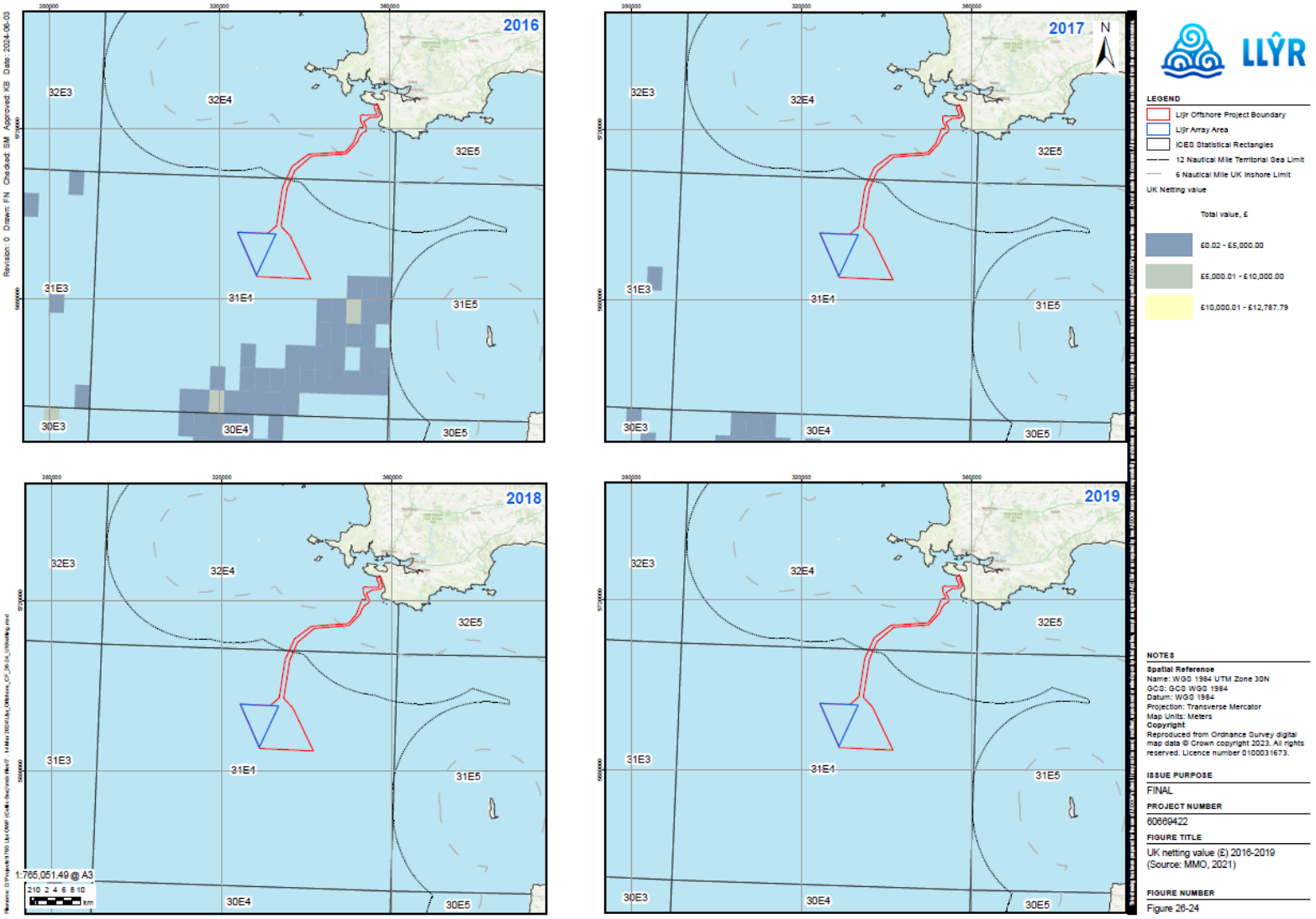

Figure 26.1-24: UK netting value (£) 2016-2019 (Source: MMO, 2021)

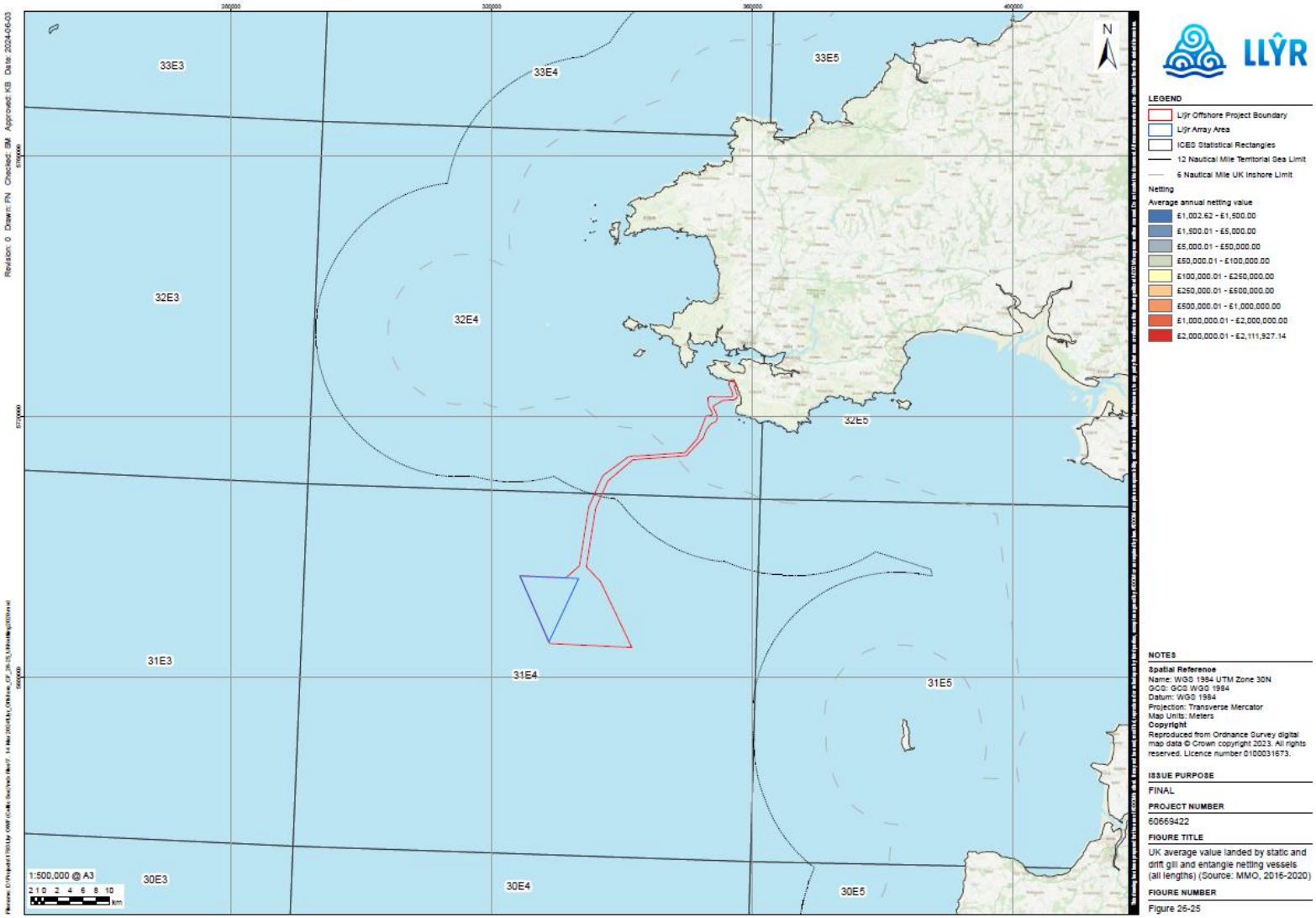

Figure 26.1-25: UK netting value (£) 2020 (Source: MMO, 2021)

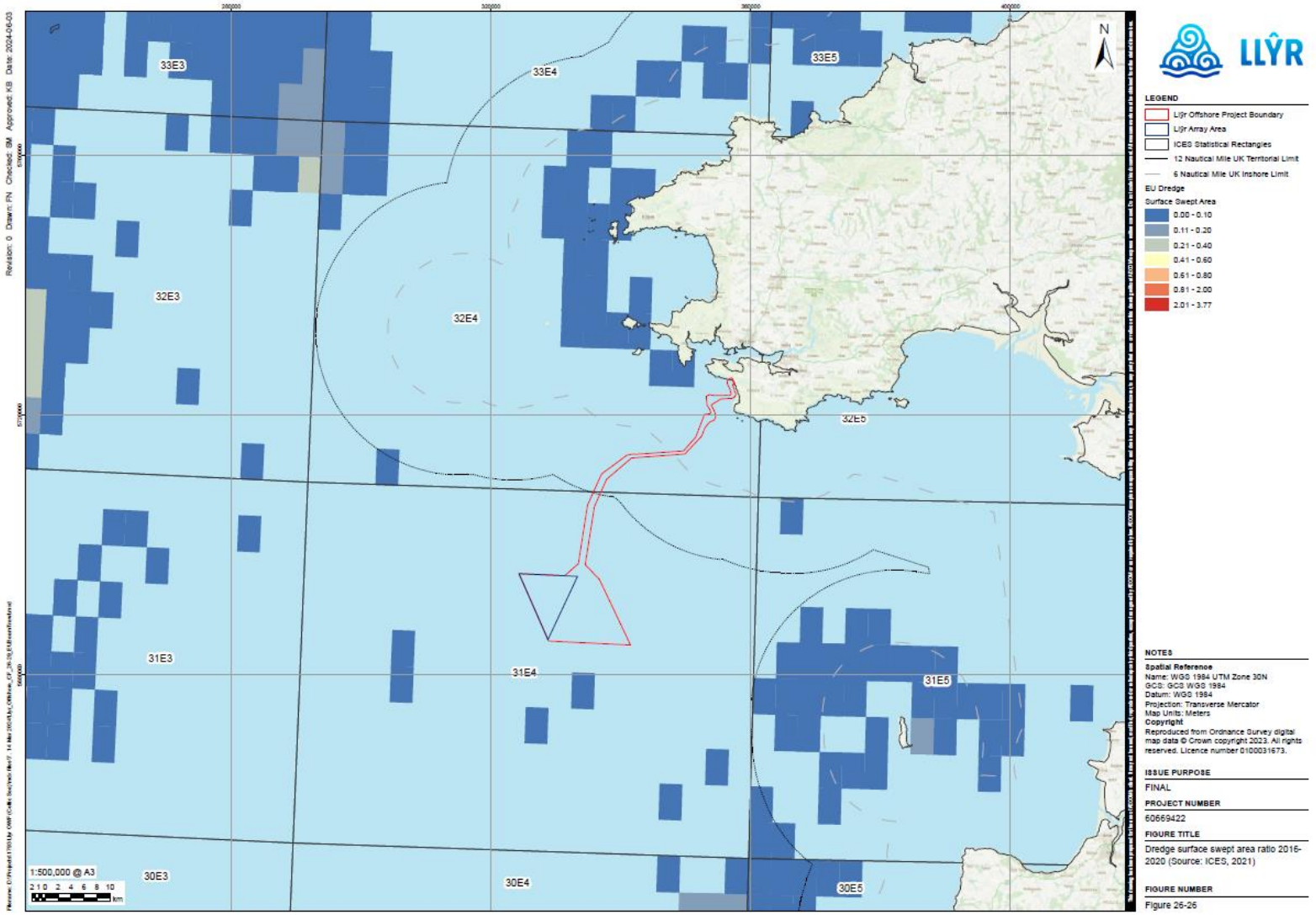

Figure 26.1-26: Dredge surface swept area ratio 2016-2022 (Source: ICES, 2021)

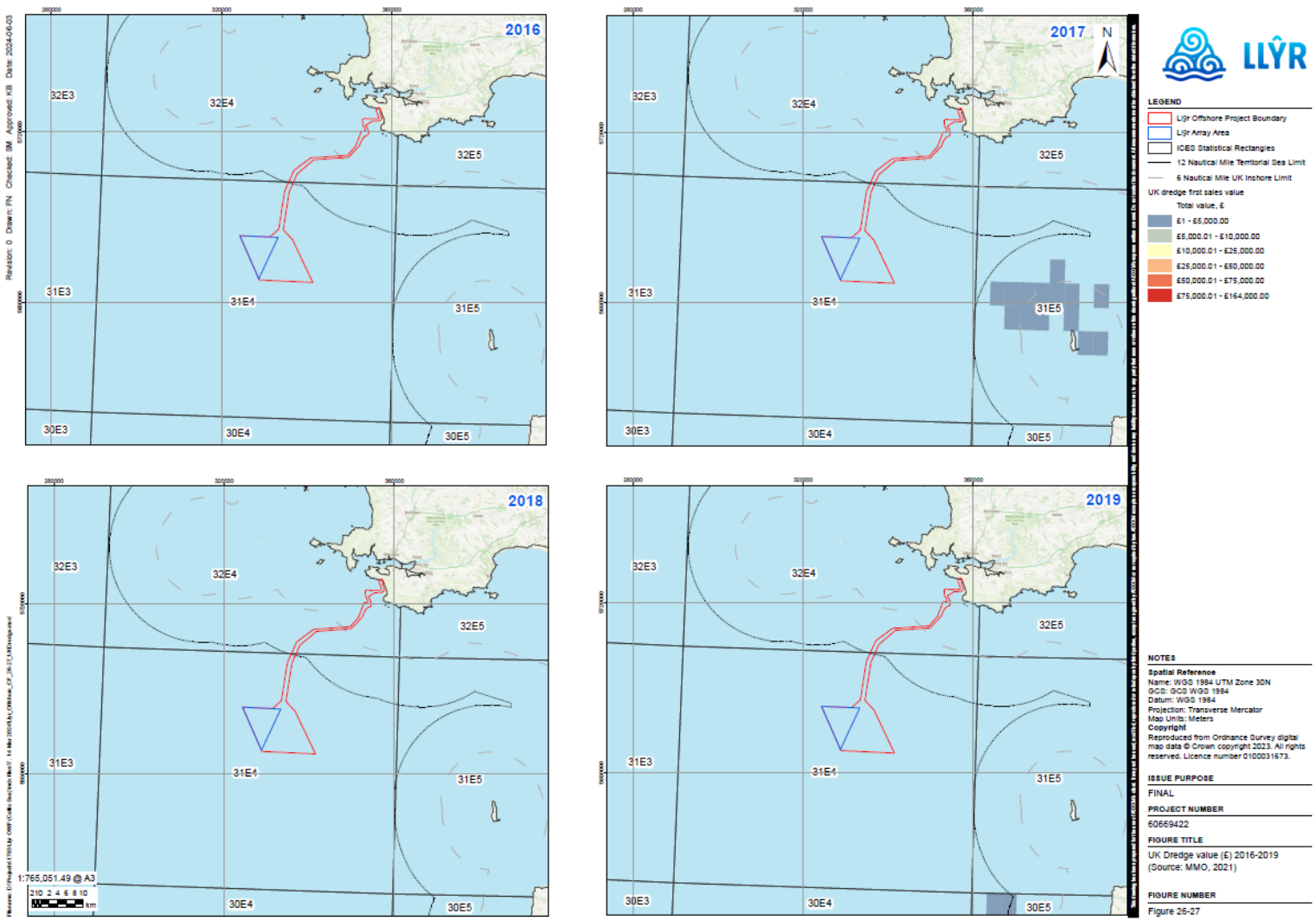

Figure 26.1-27: UK Dredge value (£) 2016-2019 (Source: MMO, 2021)

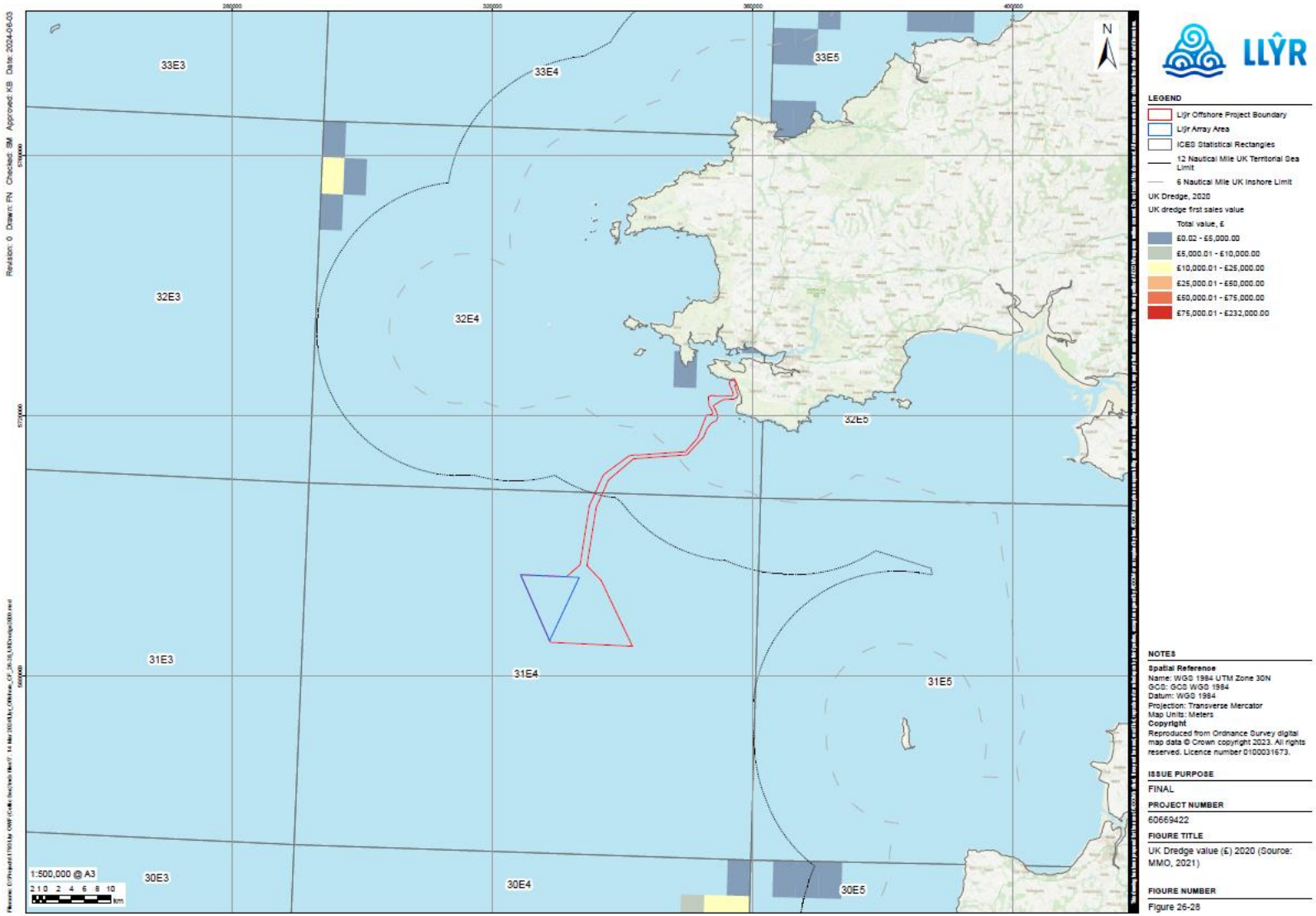

Figure 26.1-28: UK Dredge value (£) 2020 (Source: MMO, 2021)

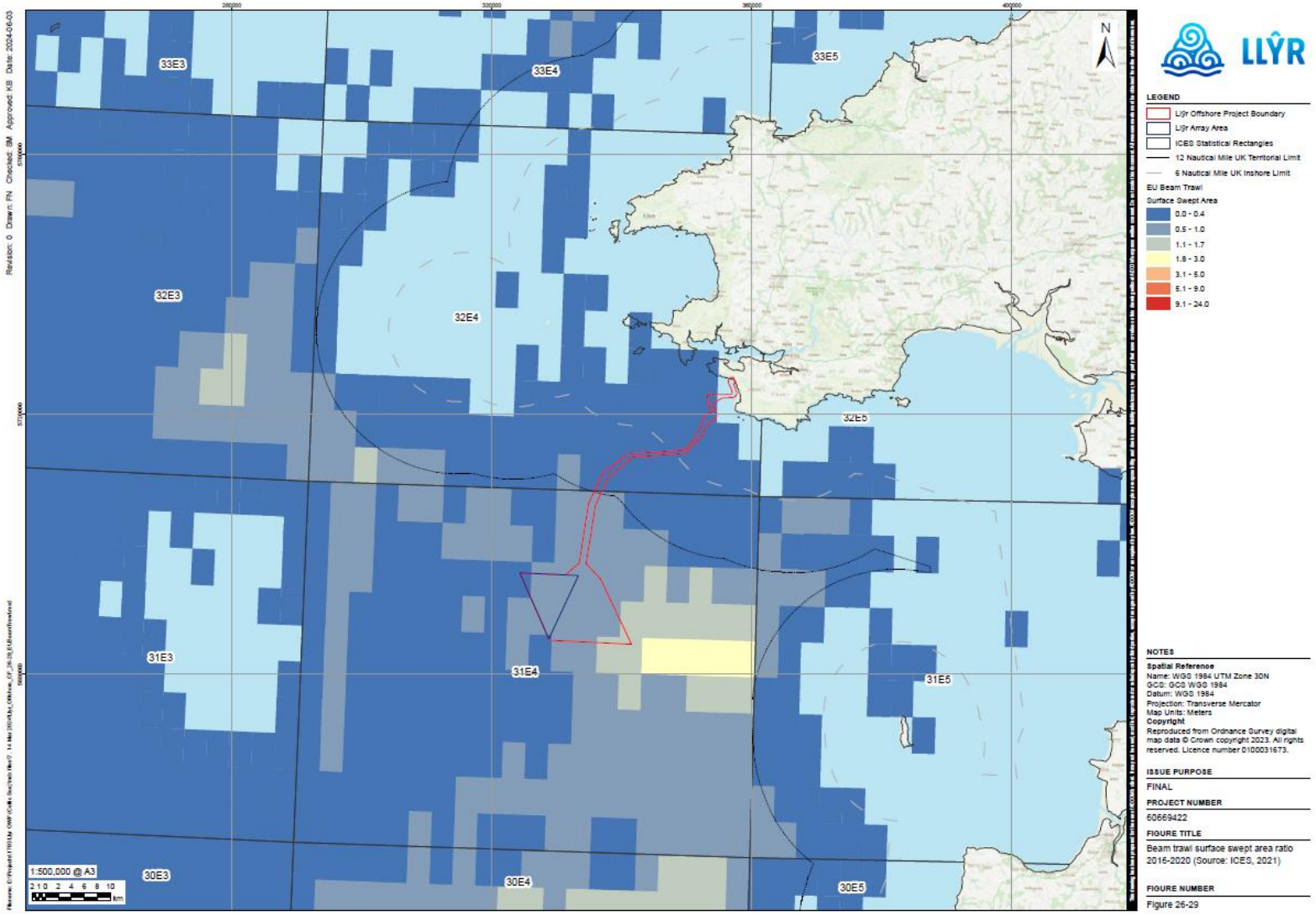

Figure 26.1-29: Beam trawl surface swept area ratio 2016-2020 (Source: ICES, 2021)

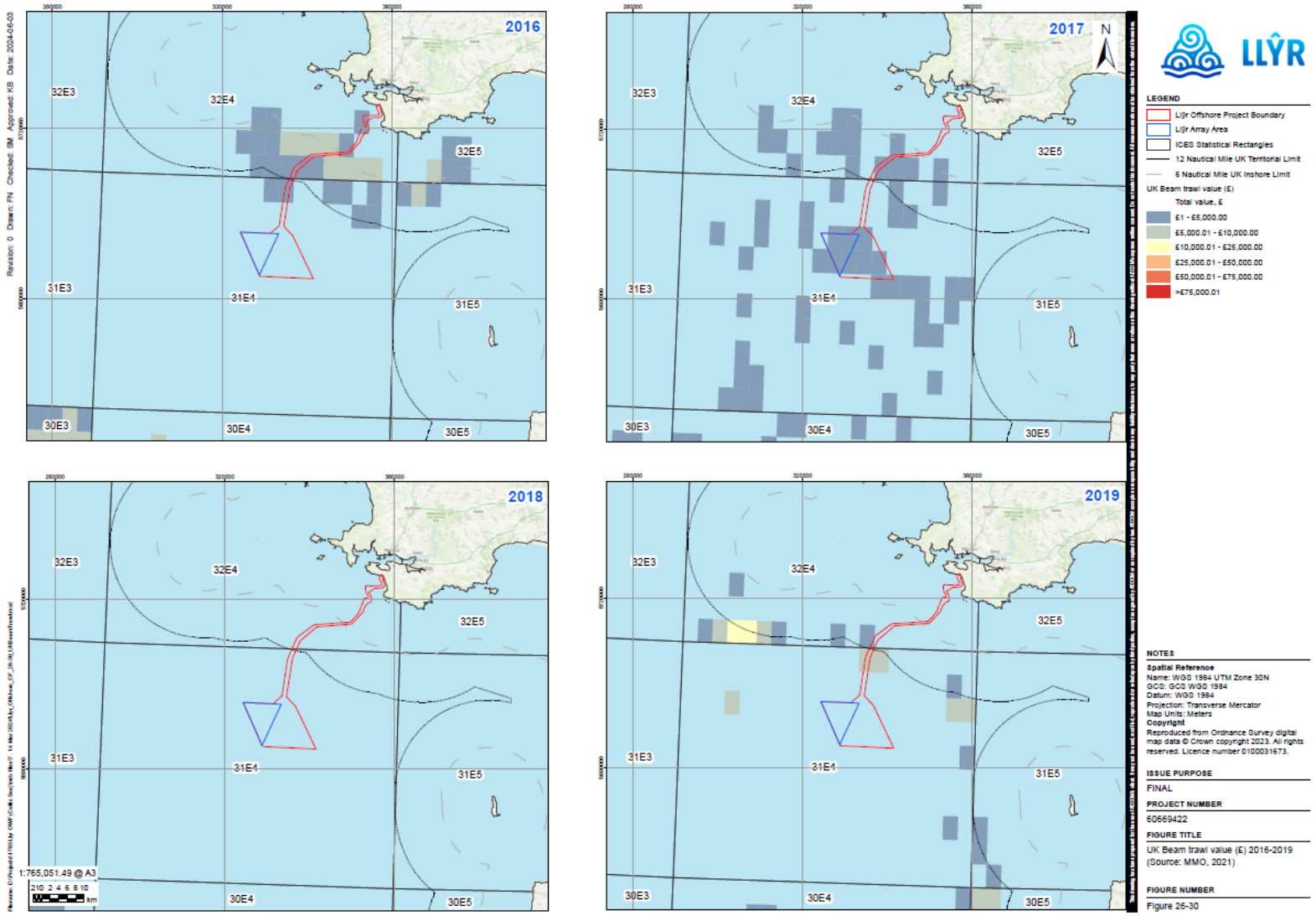

Figure 26.1-30: UK Beam trawl value (£) 2016-2019 (Source: MMO, 2021)

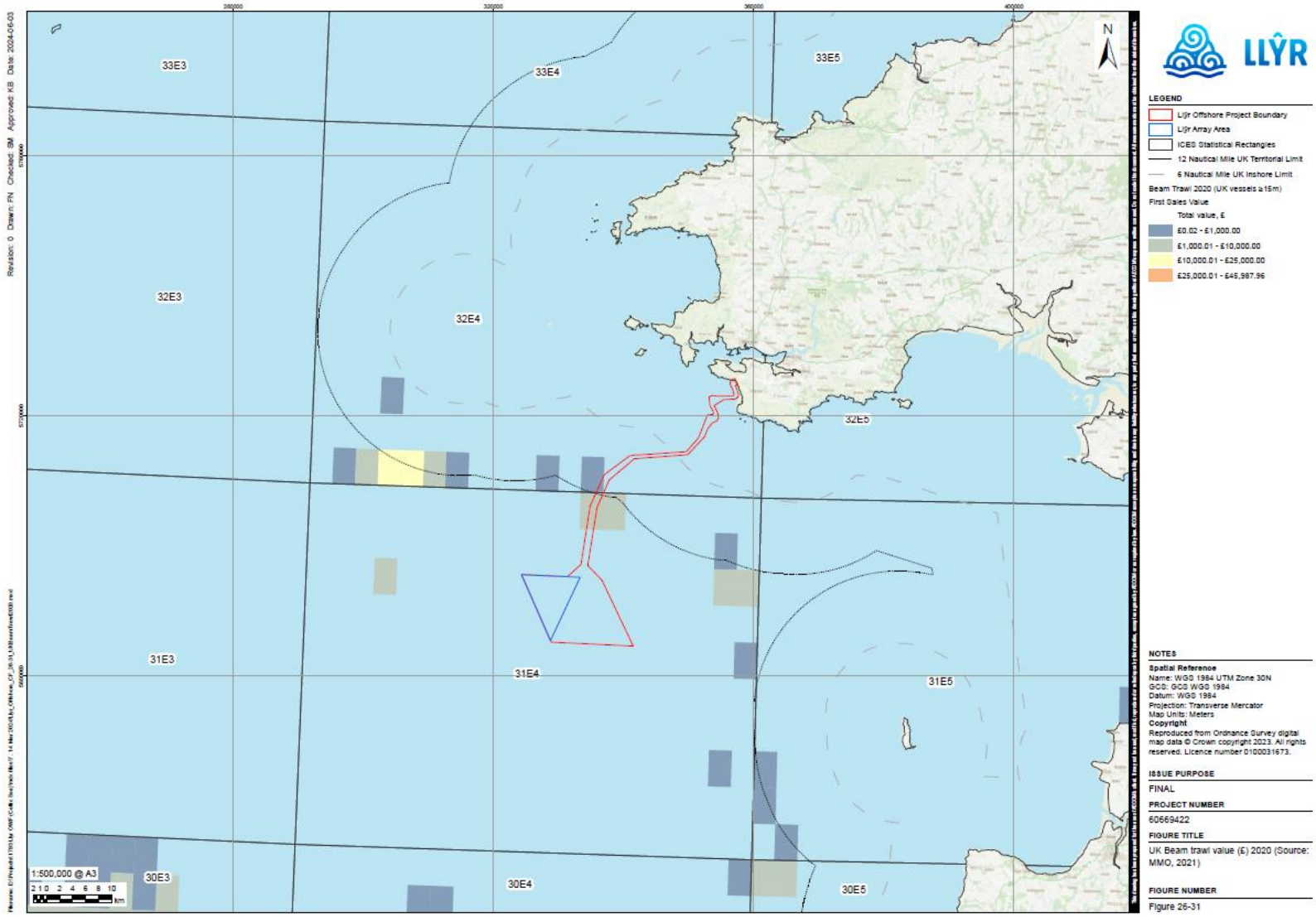

Figure 26.1-31: UK Beam trawl value (£) 2020 (Source: MMO, 2021)

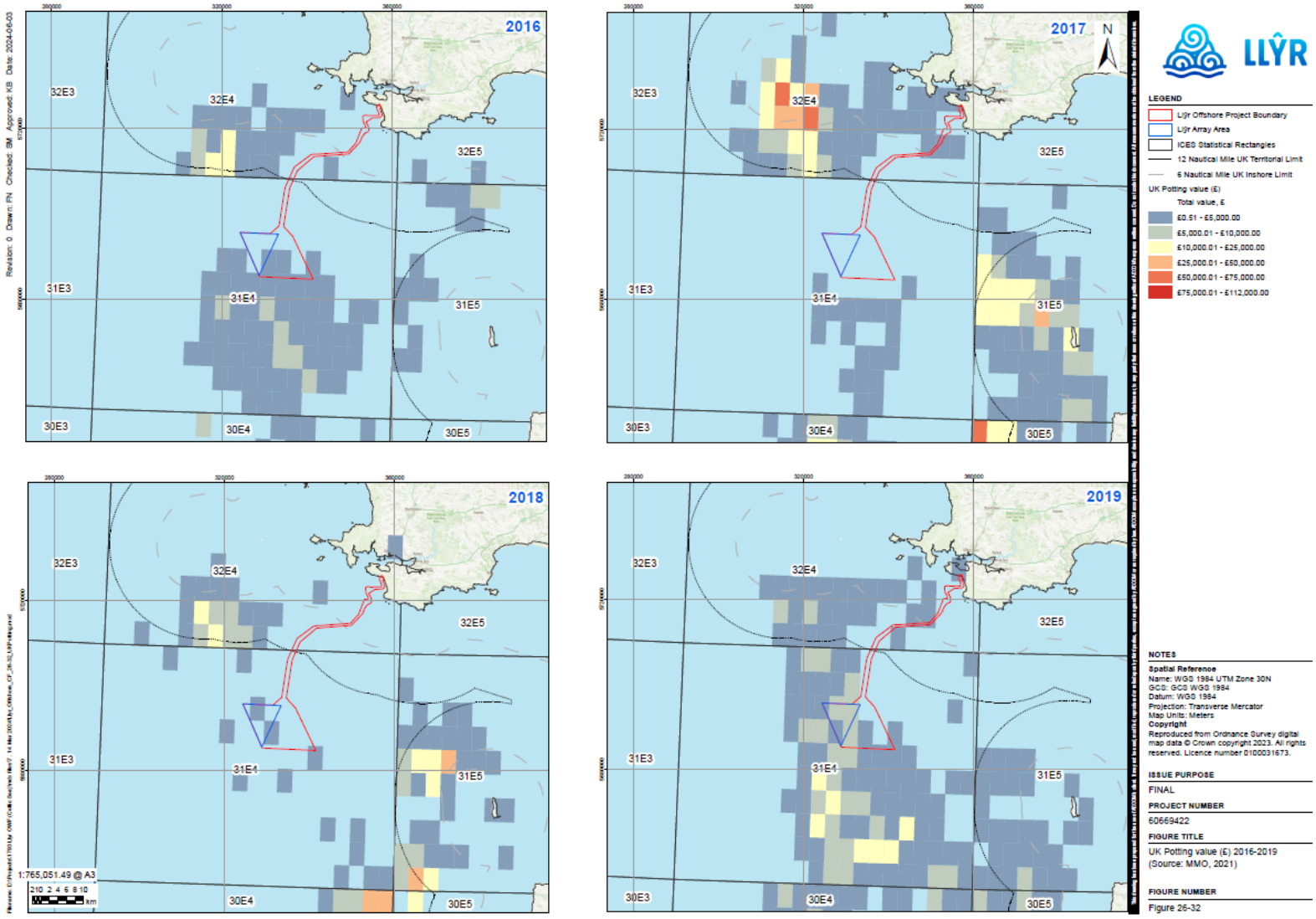

Figure 26.1-32: UK Potting value (£) 2016-2019 (Source: MMO, 2021)

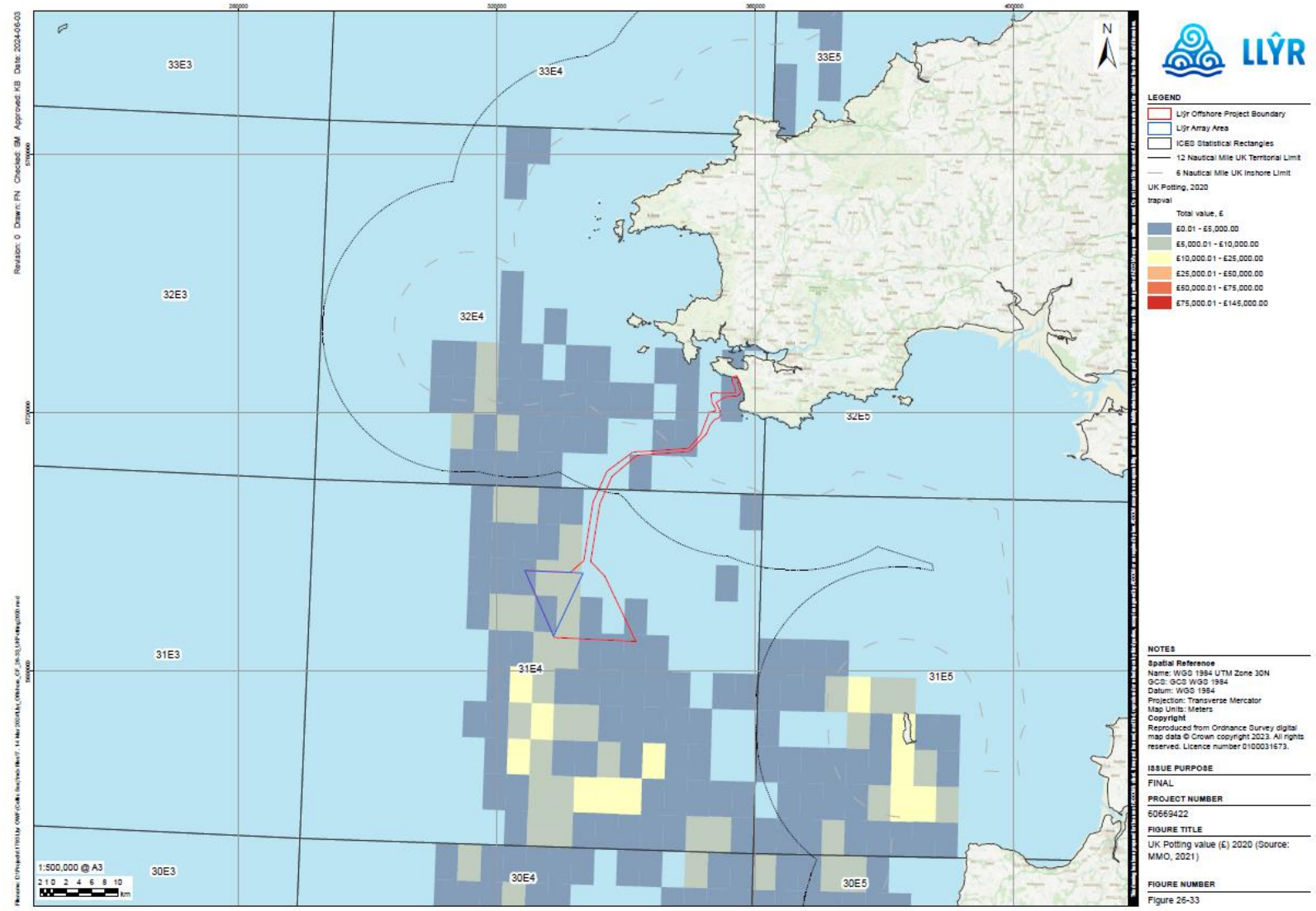

Figure 26.1-33: UK Potting value (£) 2020 (Source: MMO, 2021)

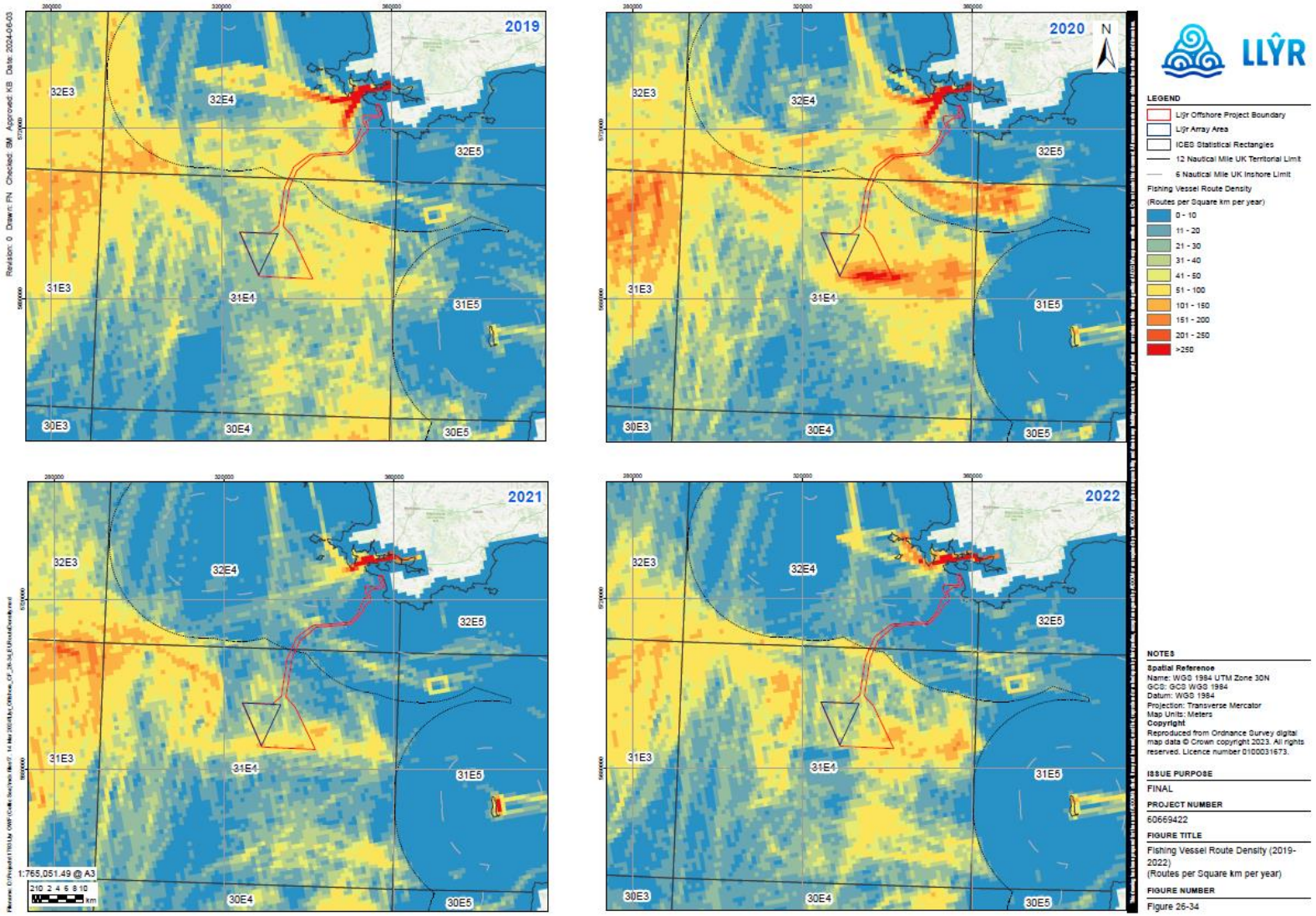

Figure 26.1-34: Fishing vessel route density 2019-2022 (Source: EMSA, 2022)

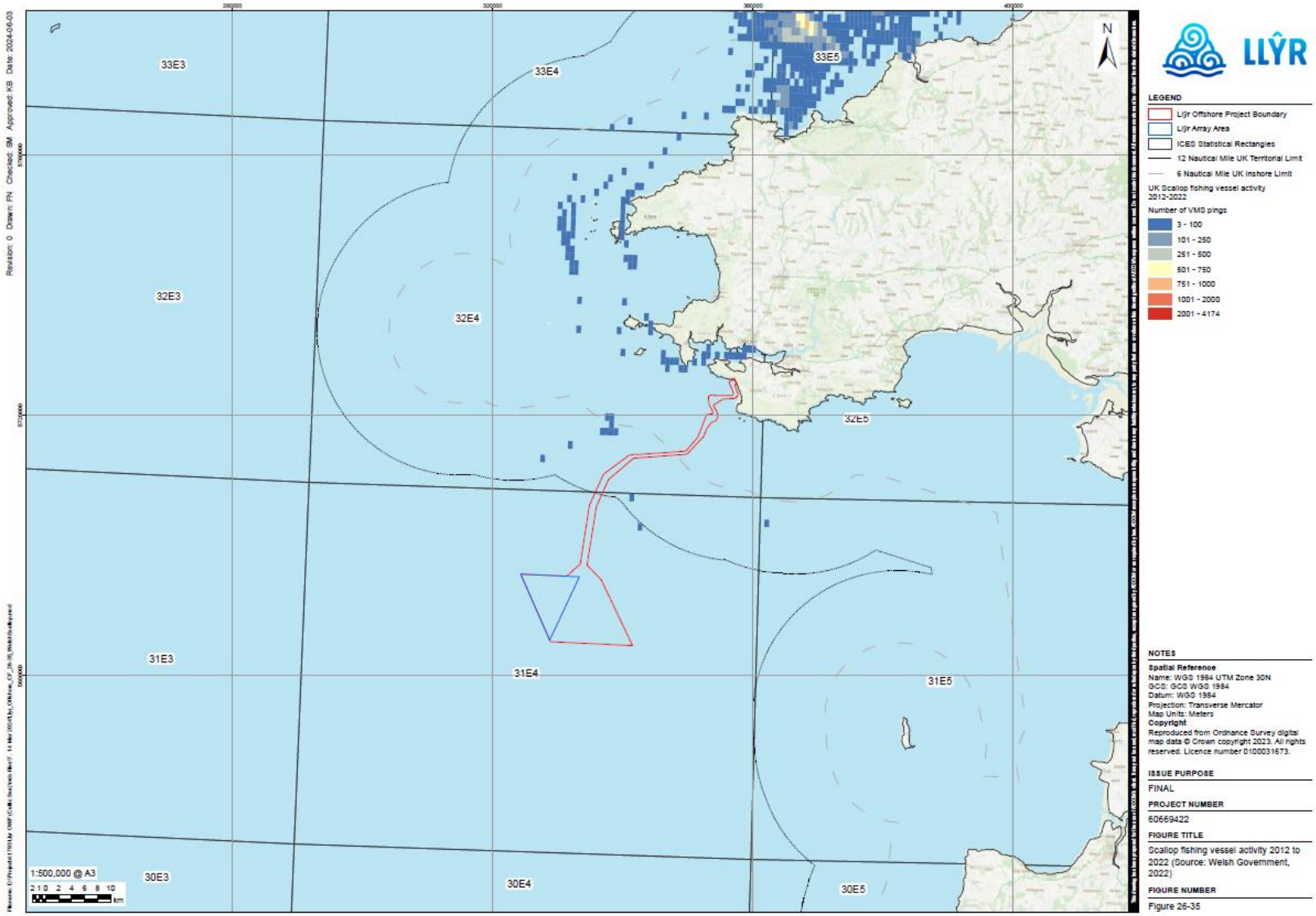

Figure 26.1-35: Welsh scallop fishing vessel activity 2012-2022 (Source: Welsh Government, 2022)

26.8 English Fisheries Activity Assessment

26.8.1. Landings Trends, Fishing Grounds and Key Species

98. The trends in landed value by English-registered vessels from ICES rectangles 31E4 and 32E4 are presented in **Figure 26.1-36** to **Figure** 26.1-39.

99. English landings are dominated by vessels targeting shellfish species with pots, most notably brown crabs and lobster, but also whelks and spider crabs. Over the 2016 to 2022 time series, landings by otter trawl have declined from a peak in 2017 whilst landings by beam trawl targeting sole, rays and mixed demersal species have increased since 2019. Data indicates some netting activity, with the primary target species being bass.

100. Overall, the value of landings by English vessels from the Study Area has increased over the time series, peaking in 2022 at £1.6 million; this is broadly aligned with trends seen across the wider regional Study Area. The average annual first sales value of English landings from the two ICES rectangles between 2016 and 2022 was approximately £900,000, with 63% of this value being associated with landings from inshore ICES rectangle 32E4. This includes landings of brown crab with an average annual value of £327,000, lobster with a value of £207,000, sole at £113,000 and whelks at £46,000.

101. Based on the landings data presented here and spatial data presented above, English-registered vessels which are active in the offshore export cable corridor and array area are primarily targeting lobster, crabs and whelk with pots, with data indicating some potential for beam trawling for sole and mixed demersal species, and netting for bass and other demersal species.

102. Outside of these two rectangles, and in surrounding ICES rectangles, fishing activity by English-registered vessels is similar to that described immediately above.

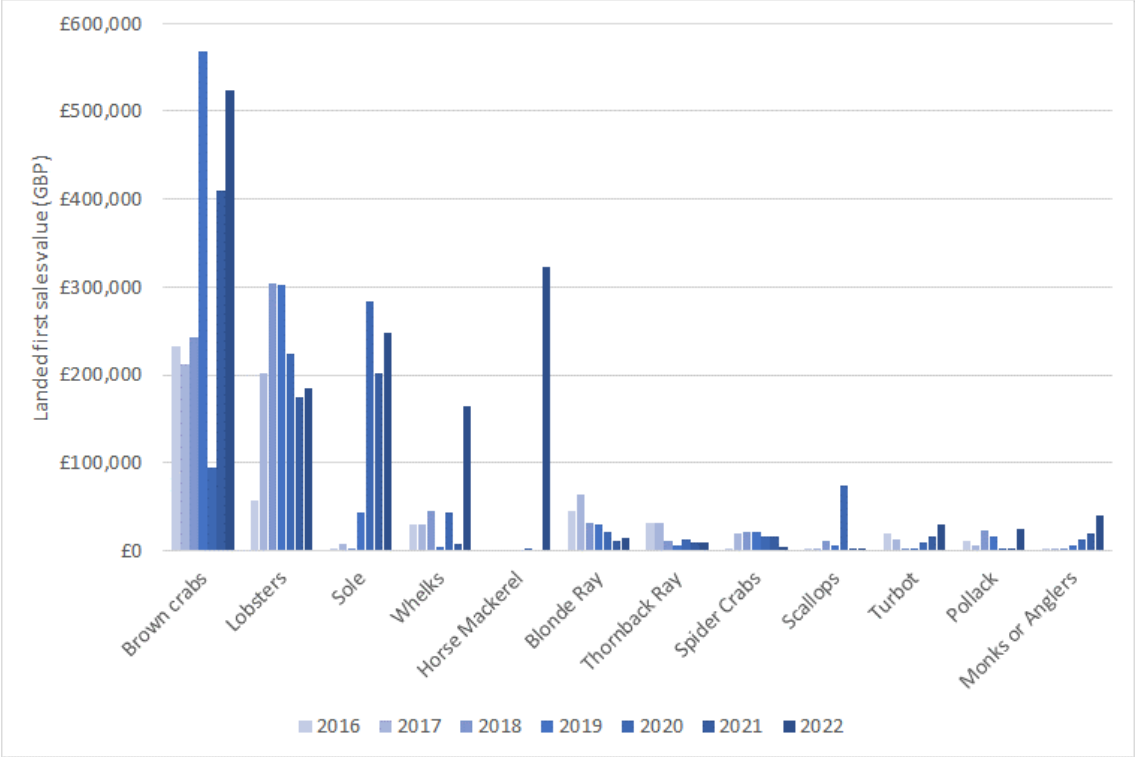

Figure 26.1-36: Landed value of all landings by English registered vessels from the Study Area indicating key species (MMO, 2023)

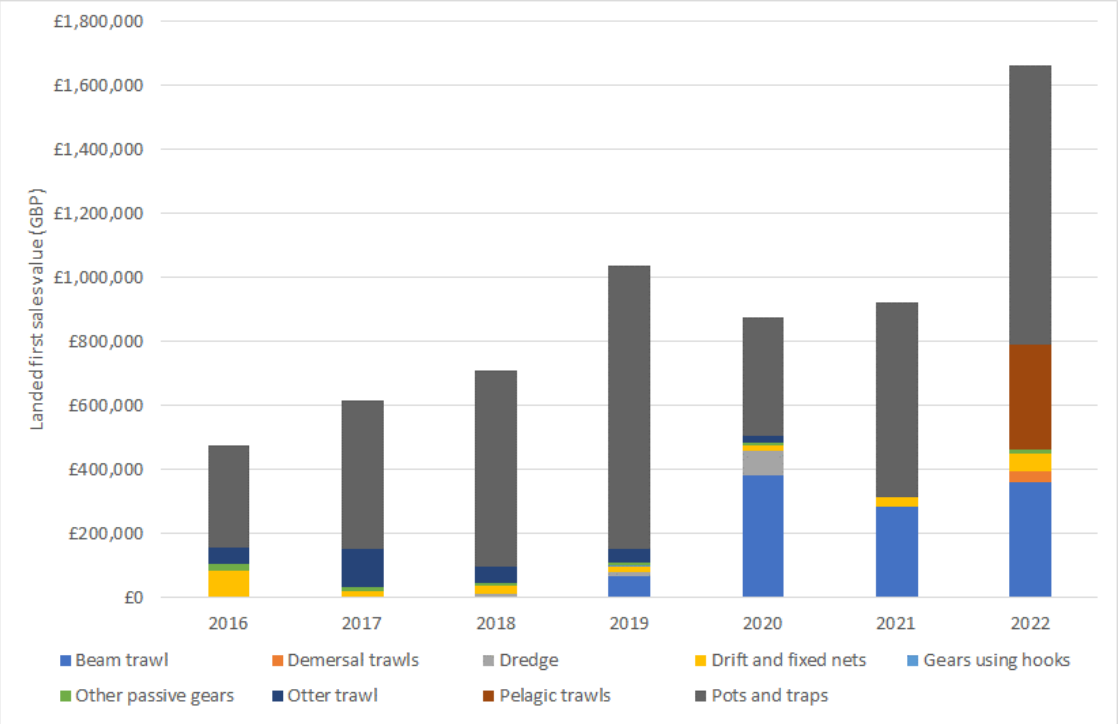

Figure 26.1-37: Landed value of all landings by English registered vessels from the Study Area indicating gear type (MMO, 2023)

Ports and Vessel Fleets

103. Vessels in the length category 12 to 15 m accounted for 46% (by value in 2021) of landings by English vessels from the Study Area. These vessels were predominantly larger potting vessels. Larger vessels of length 24 to 40 m accounted for 27% of landings by English vessels, with these vessels being beam trawlers. Smaller vessels in the 8 to 10 m length category accounted for 17% of landings, and all were potters.

104. The MMO provides landings statistics by port of landing. As of 2021, the landings in this dataset are attributed to ICES rectangles, so it is possible to link the location of fishing to the landed catch, as shown in **Figure 26.1-38**. Data indicate landings by English-registered vessels into English and Welsh ports, with most landings from ICES rectangle 31E4 being landed to Padstow. Milford Haven receives the majority of landings by English vessels from ICES rectangle 32E4. The bulk of landings into Padstow are of shellfish, with Milford Haven receiving both demersal and shellfish landings. Sporadic pelagic landings are also made to Dutch ports.

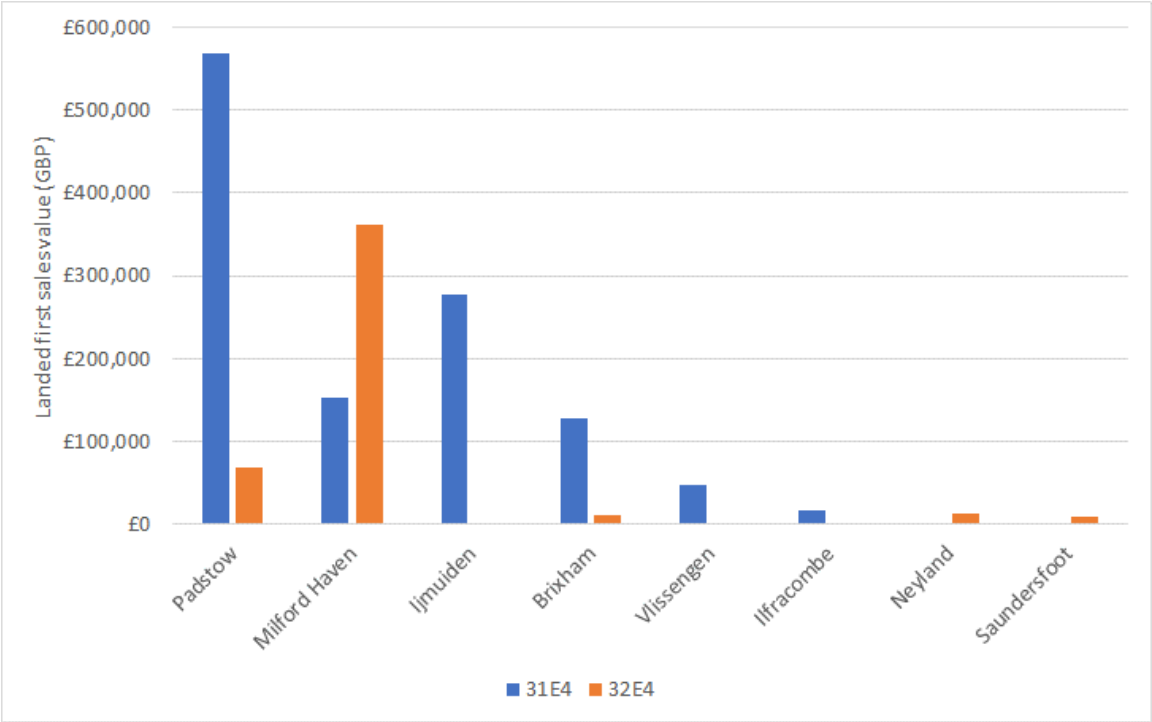

Figure 26.1-38: Landed value of all landings by English registered vessels from the Study Area indicating port of landing in 2022 (MMO, 2023)

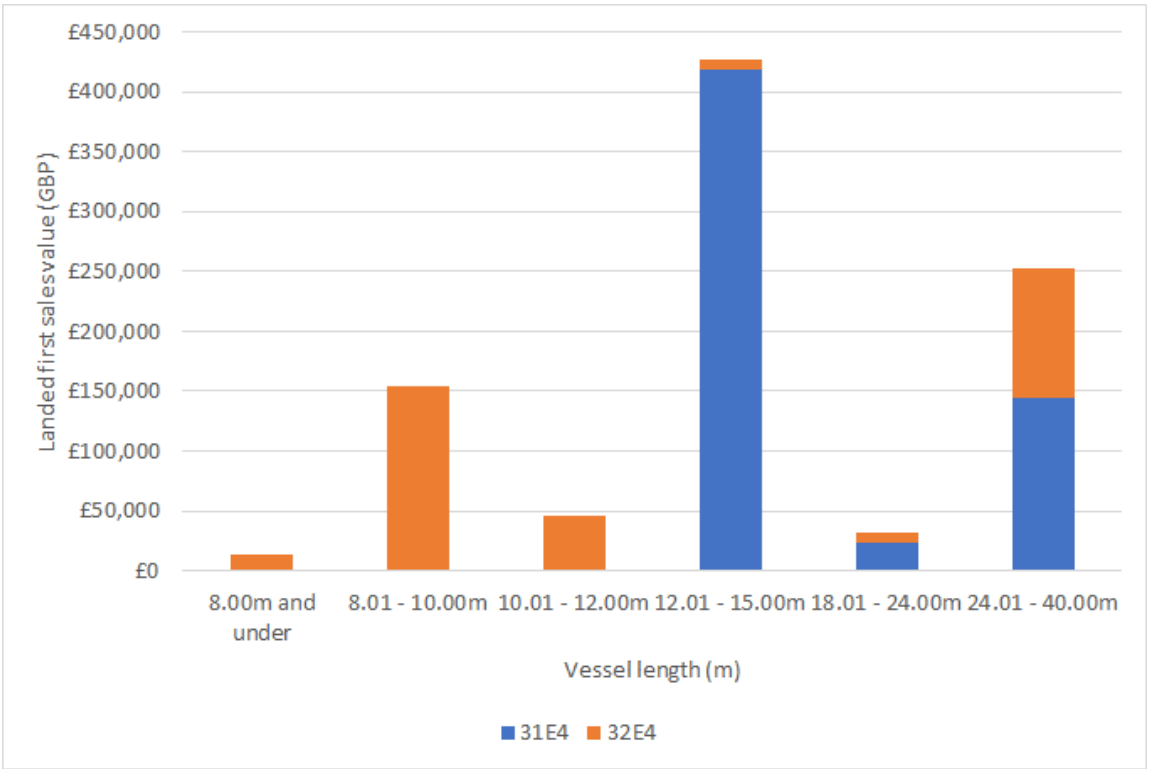

Figure 26.1-39: Landed value of all landings by English registered vessels from the Study Area indicating vessel length in 2021 (MMO, 2022)

26.9 Welsh Fisheries Activity Assessment

26.9.2. Landings Trends, Fishing Grounds and Key Species

105. The trends in landed value by Welsh-registered vessels from ICES rectangles 31E4 and 32E4 are presented in

106. **Figure** 26.1-40 to **Figure 26.1-43**.

107. Welsh landings are dominated by vessels targeting shellfish species with pots, most notably lobster, whelk and brown crabs. To a lesser extent, nets are used to target demersal species including bass, sole and rays.

108. In total Welsh landings from the Study Area account for approximately 67% of total UK landings value between 2016 and 2022. Annual average landings from the Study Area by Welsh vessels were valued at £1.9 million; landings peaked in 2017 and 2018, declining to their lowest in 2020 and showing a gradual increase up to 2022. Over 94% of this value is attributed to landings from inshore ICES rectangle 32E4. This includes landings of whelk with an average annual value of £620,000, lobster with a value of £724,000 and brown crab at £286,000.

109. Based on the landings data presented here and spatial data presented above, Welsh-registered vessels active in the offshore export cable corridor and array area are primarily targeting lobster, whelk and crab and common prawns with pots, and using nets and hooked gear to target bass and other demersal species.

Ports and Vessel Fleets

110. Vessels in the length category 12 to 15 m accounted for less 1% (by value in 2021) of landings by Welsh vessels from the Study Area. These vessels were predominantly larger potting vessels. Vessels of 10 to 12m accounted for 38% of landings and were again mainly potters with some netting vessels. Smaller vessels of 8 to 10 m length accounted for 22% of landings by Welsh vessels, with these vessels being mainly potters, and a smaller proportion being netters. Smaller vessels in the 8 m and below length category accounted for 40% of landings, and were being mainly potters, with some vessels deploying nets and hooked gear.

111. Data indicate landings by Welsh vessels into English and Welsh ports, with most landings from the Study Area by Welsh vessels being made in Milford Haven. Lesser volumes are landed to other local ports including Solva and Porthgain. As per landings described above, the majority of landings comprise shellfish species.

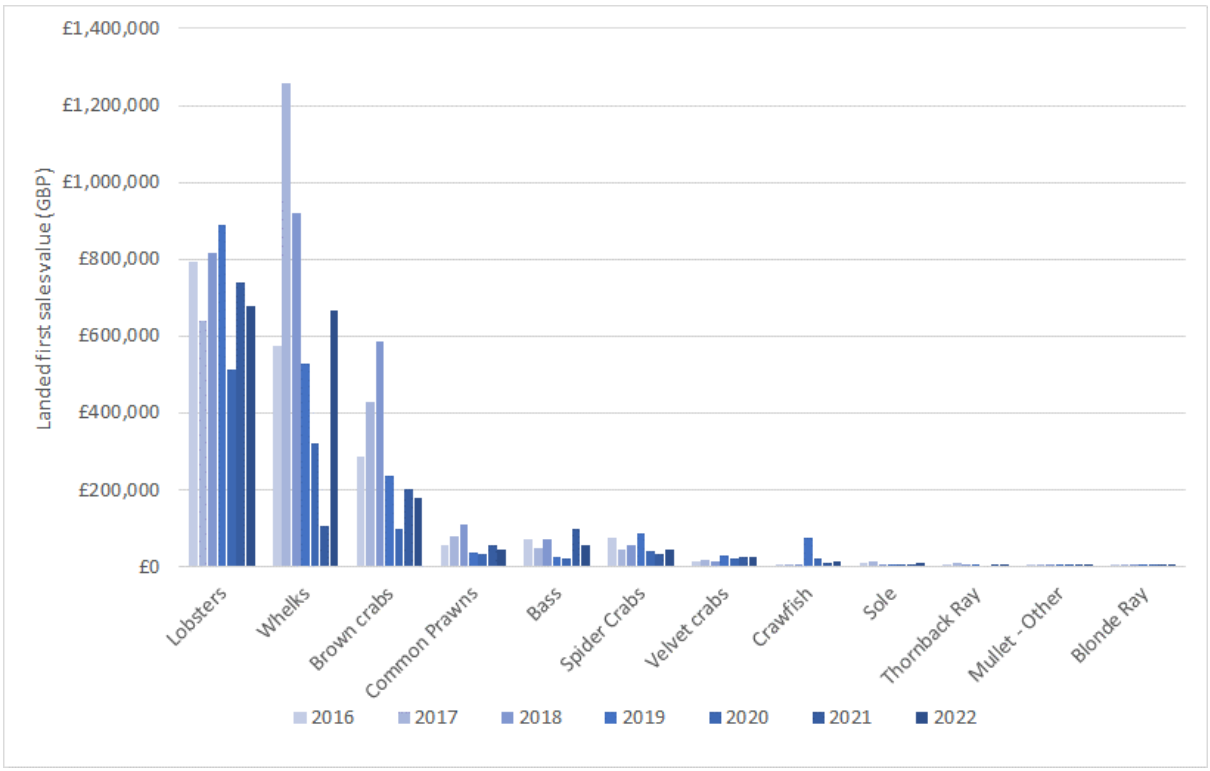

Figure 26.1-40: Landed value of all landings by Welsh registered vessels from the Study Area indicating key species (MMO, 2023)

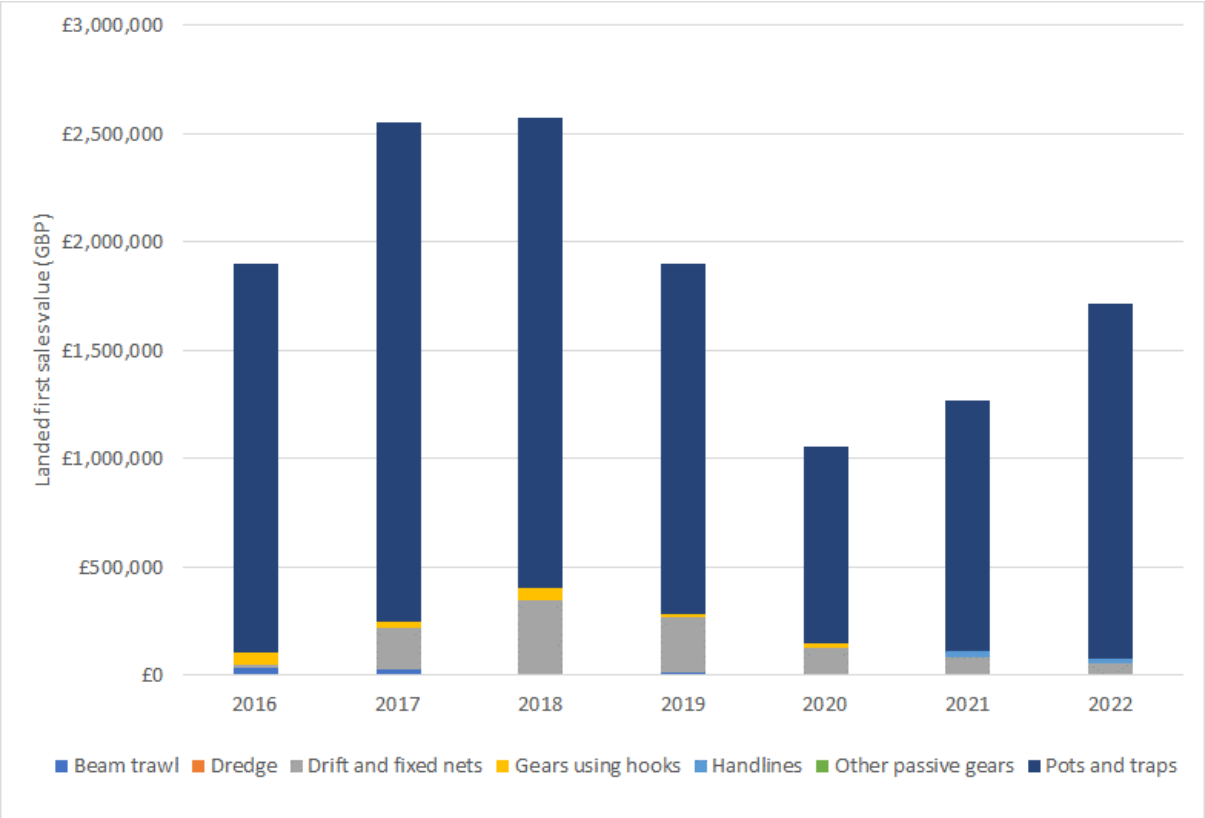

Figure 26.1-41: Landed value of all landings by Welsh registered vessels from the Study Area indicating gear type (MMO, 2023)

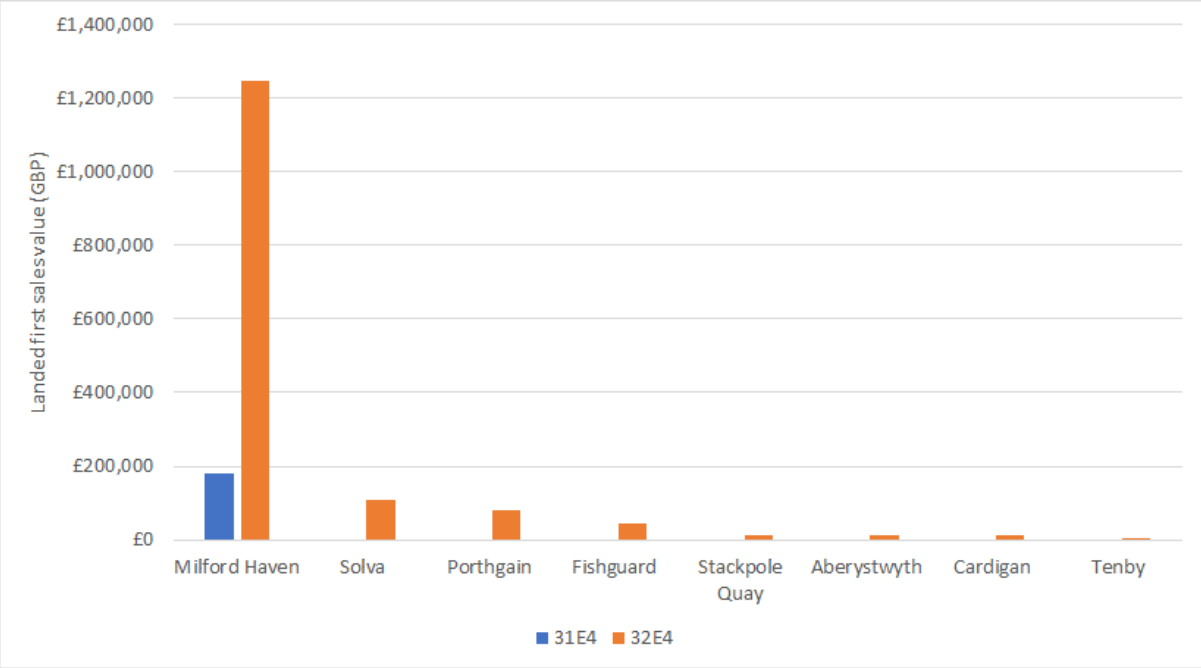

Figure 26.1-42: Landed value of all landings by Welsh registered vessels from the Study Area indicating port of landing (MMO, 2022)

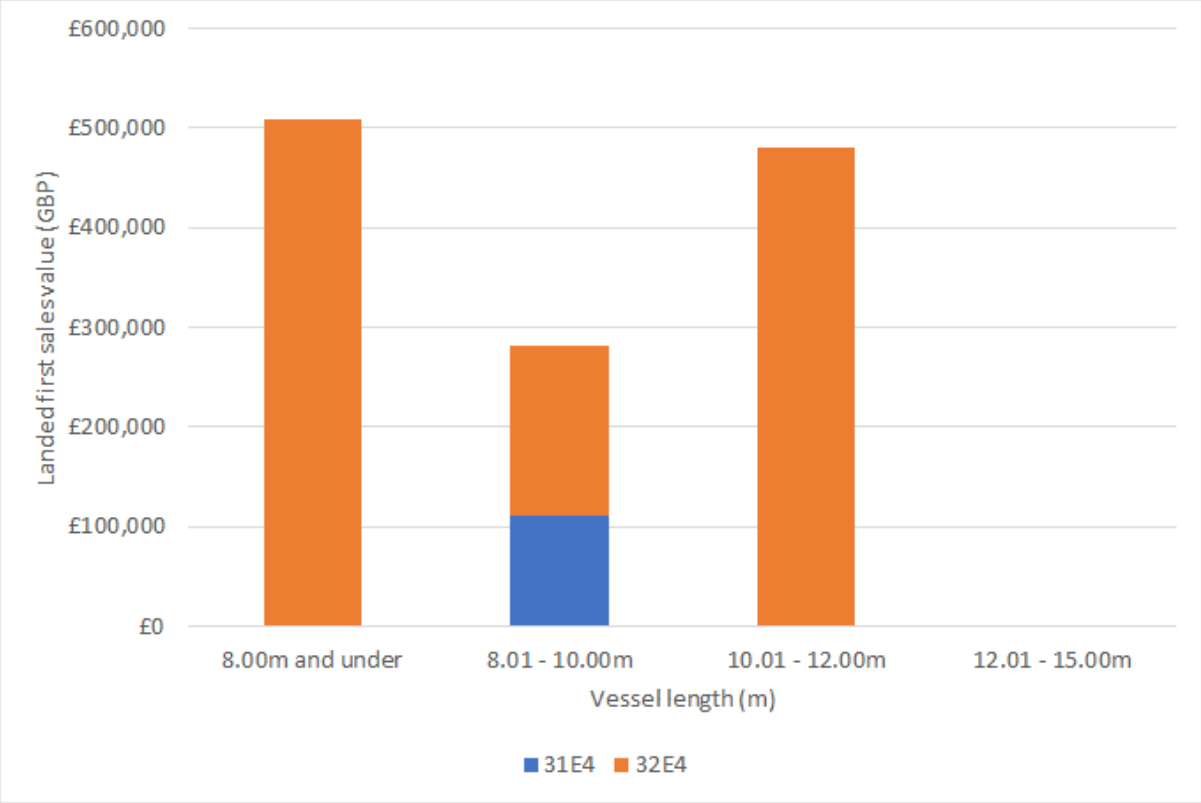

Figure 26.1-43: Landed value of all landings by Welsh registered vessels from the Study Area indicating vessel length (MMO, 2022)

26.10 Belgian Fisheries Activity Assessment

112. The principal methods used by the Belgian fleet in the Study Area are beam trawling and to a lesser extent demersal otter trawling. It is understood that some vessels are able to operate both gears. Belgian vessels in this area target a range of species, but primarily sole and plaice, taking other demersal species including anglerfish and rays. Vessels are over 15 m in length.

On average, between 2012 to 2016 5,700 tonnes of demersal fish species were landed by Belgian vessels. Over 80% of landings were from offshore ICES rectangle 31E4.

113. Belgian vessels have historic fishing rights in the Study Area between the UK's 6 NM and 12 NM limits. VMS data indicates that Belgian beam and otter trawlers have wide operational ranges, targeting grounds in the Southern North Sea, the English Channel, the Celtic Sea and the Irish Sea. Within the Study Area, VMS data indicates the potential for Belgian trawlers to be active across the proposed Project area, particularly in the south-east extent of the array area. Anecdotally, EU vessels (including Belgian vessels) that historically landed some of their catches into Milford Haven have made lesser landings into the Welsh port in recent years, post-Brexit. This is supported by trends shown in MMO landings data, with Belgian vessels making landings valued at £13.3 million into Milford Haven in 2019, and the equivalent value in 2022 being £15,500.

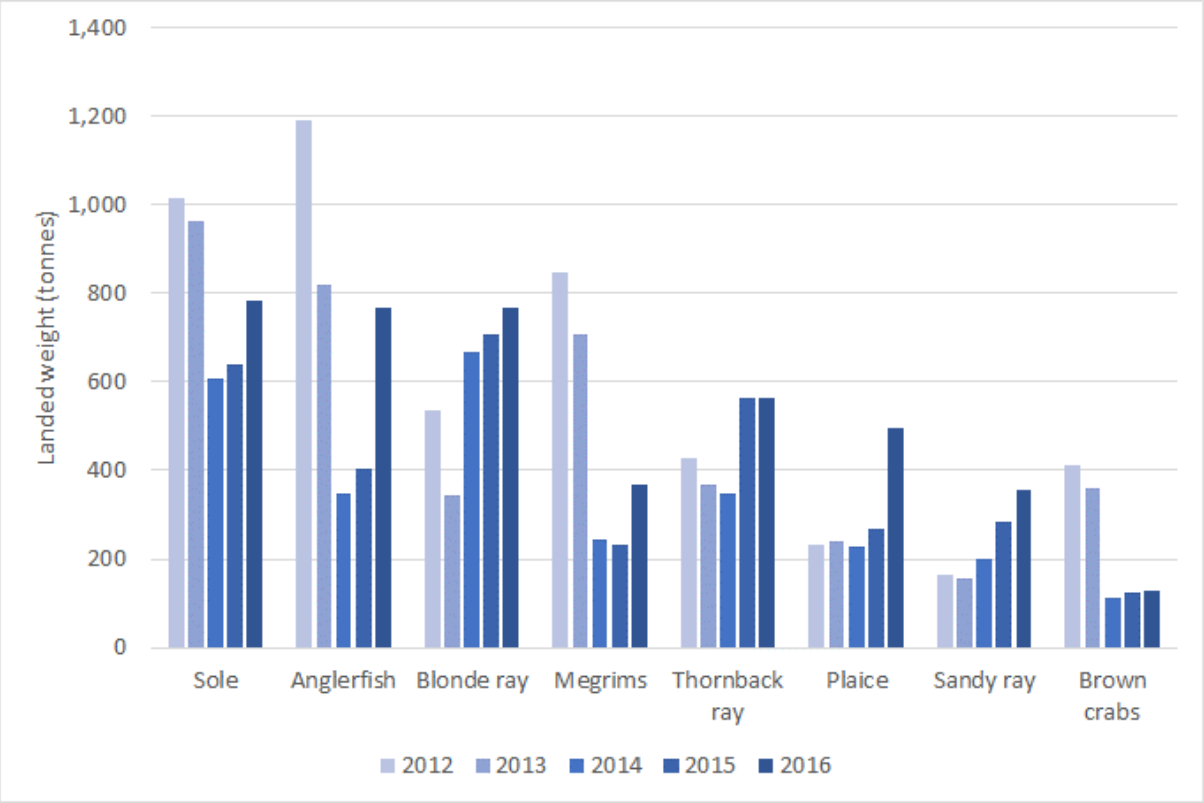

Figure 26.1-44: Landed weight of key species by Belgian registered vessels from the Study Area (EU DCF, 2022)

26.11 French Fisheries Activity Assessment

114. Landings data indicates that the principal method used by the French fleet in the Study Area is demersal otter trawling. French vessels in this area target a range of demersal species, but primarily rays, haddock, whiting and anglerfish (**Figure 26.1-45**). Vessels are over 15 m in length. On average, between 2012 to 2016 4,400 tonnes of demersal fish species were landed by French vessels. Over 60% of landings were from inshore ICES rectangle 31E4.

115. French vessels have historic fishing rights in the Study Area between the UK's 6 NM and 12 NM limits. VMS data indicates that French otter trawlers have wide operational ranges, targeting grounds in the Southern North Sea, the English Channel, the Celtic Sea and the Irish Sea. Within the Study Area, VMS data indicates the potential for French trawlers to be active across the proposed Project area, particularly across the central portion of the offshore export cable corridor.

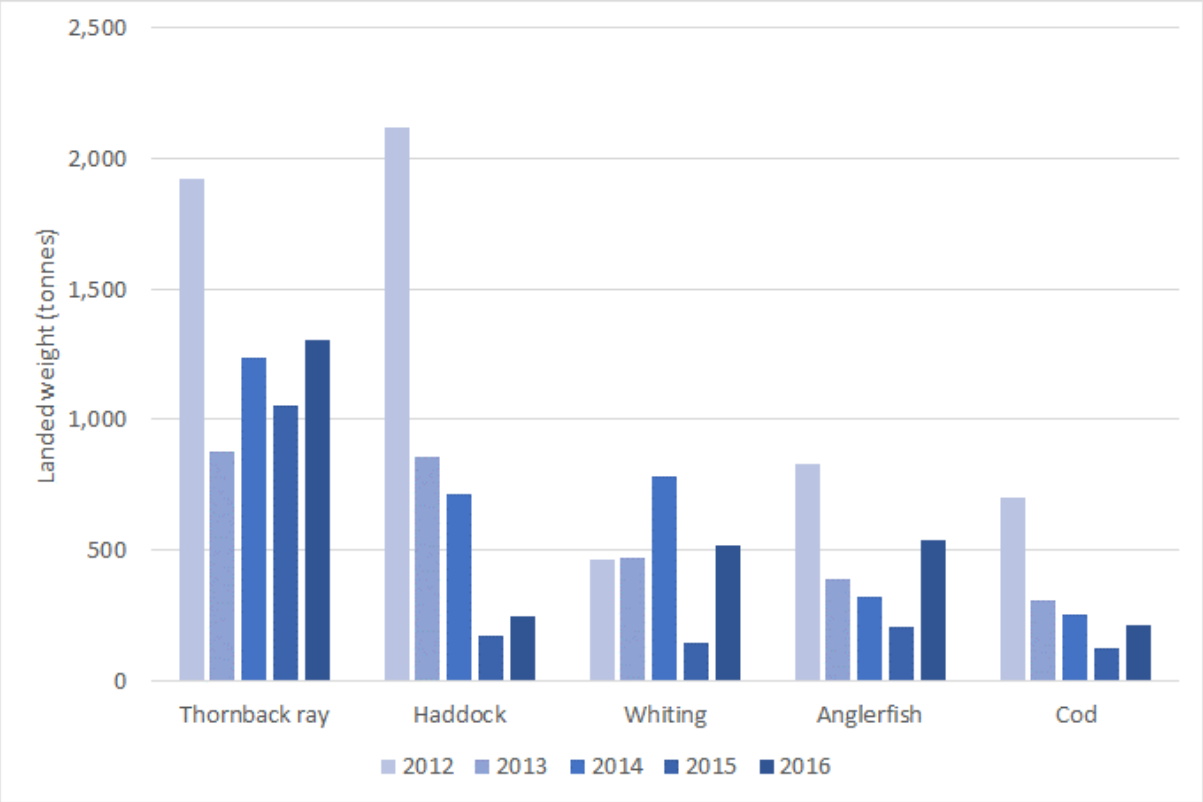

Figure 26.1-45: Landed weight of key species by French registered vessels from the Study Area (EU DCF, 2022)

26.12 Irish Fisheries Activity Assessment

116. The principal method used by the Irish fleet in the Study Area is demersal otter trawling. Irish vessels in this area target a range of species, but primarily Nephrops, also taking whiting. Vessels are over 15 m in length. On average, between 2012 to 2016 1,500 tonnes of Nephrops and demersal fish species were landed by Irish vessels. Approximately 70% of landings were from inshore ICES rectangle 31E4. Within the Study Area, VMS data indicates that Irish trawl activity may be undertaken within proposed Project boundaries but it expected to be largely focused to the west, on the Smalls fishing ground.

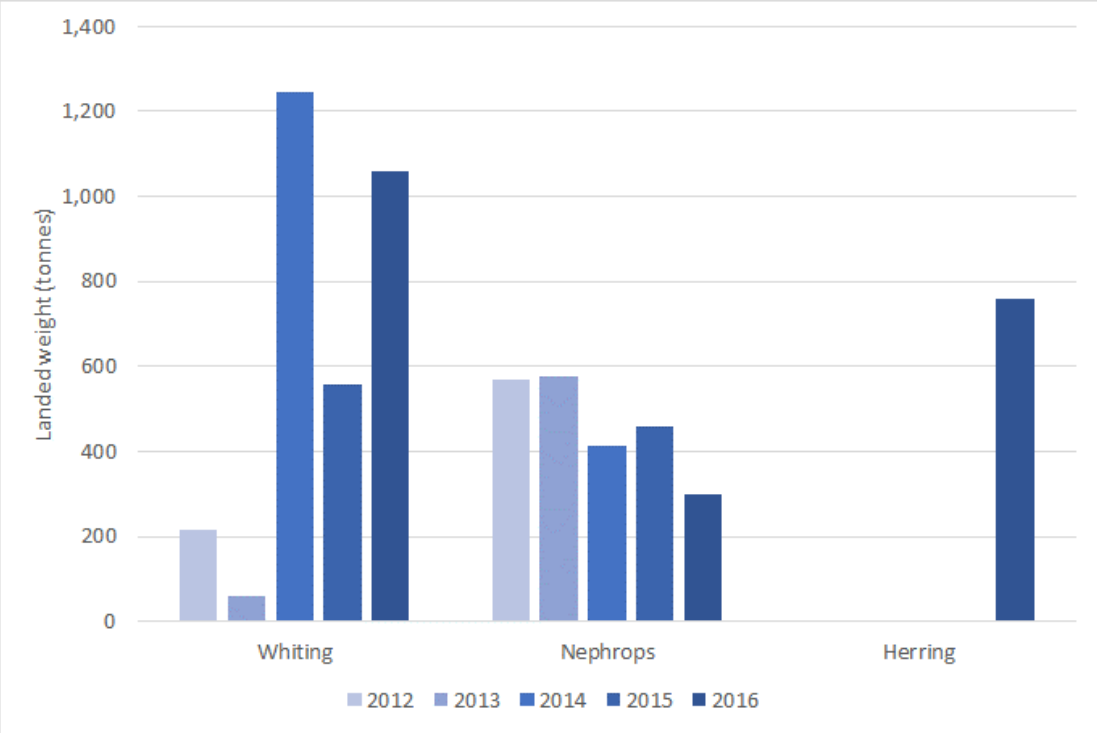

Figure 26.1-46: Landed weight of key species by Irish registered vessels from the Study Area (EU DCF, 2022)

26.13 Future Baseline Environment

117. Commercial fisheries patterns change and fluctuate based on a range of natural and management-controlled factors. This includes 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 pandemic;
- Market prices: commercial fishing fleets respond to market prices by focusing effort on higher value target species when prices are high and markets in demand;
- Stock abundance: fluctuation in the biomass of individual species stocks in response to 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; and
- Sustainability: with seafood buyers more frequently requesting certification of the sustainably of fish and shellfish products, such as the Marine Stewardship Council certification, industry is adapting to improve fisheries management and wider environmental impacts.

118. 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 five 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 capture any potential changes in commercial fisheries activity resulting from the withdrawal of the UK from the EU.

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

120. 25% of the EU's fisheries quota in UK waters will be transferred to the UK over the five-year transition period; most of this quota has already been transferred and distributed across the four nations of the UK. After the five-year transition there will be annual discussions on fisheries opportunities. Across the 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.

121. Market changes have the potential to impact fishing activity in the 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. One of the key species landed by potters in the area, is whelk, which is primarily exported to non-EU countries, including Korea, Taiwan and Singapore. The trade in UK landed whelk has therefore not been as affected by the Brexit process and associated implications on shellfish exports in comparison to other species. In terms of future baseline scenarios, it is therefore possible, for example, that the UK fleet will more heavily target whelk given that prices have increased in recent years, and they are exported to non-EU countries.

122. In relation to EU access to UK territorial waters, provision has been made for EU vessels with a track record of fishing between 6 NM and 12 NM to be issued with licences to continue fishing. This licencing process is ongoing, and it is unknown how many EU vessels this is applicable to. Therefore, fishing activity within the Study Area is likely to remain consistent with the current baseline in terms of the fleets and Member States in operation.

123. 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).

26.14 Summary

124. The key fleet métiers operating across the Study Area include (in no particular order):

- Welsh potters targeting lobster, whelk and brown crab, operating across the Study Area;
- Welsh inshore netting and hooked gear fleets targeting bass, operating inside of the 6 NM limit;
- English potting fleet targeting brown crab and lobster, operating off the Cornwall and Devon coastlines;
- English beam trawl fleet targeting sole and other demersal species, operating primarily to the south of the Study Area but with some activity inside of the Study Area;
- English scallop dredge fleet, operating to the east and south-east of the proposed Project;

- Belgian beam trawlers targeting sole and plaice;
- French demersal otter trawlers targeting whiting, haddock and rays; and
- Irish demersal otter trawlers targeting whiting and Irish Nephrops trawlers.

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