

A photograph of an offshore wind farm at sunset. The sky is a mix of orange, yellow, and grey, with a few clouds. The sun is low on the horizon, creating a warm glow. In the foreground, there are dark, choppy waves with white foam. Several wind turbines are visible in the background, their silhouettes against the bright sky. The overall mood is serene and powerful.

# Salamander Offshore Wind Farm

Offshore EIA Report

Volume ER.A.3, Chapter 13: Commercial Fisheries



Powered by Ørsted and  
Simply Blue Group

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## Glossary

Term	Definition
Applicant	Salamander Wind Project Company Limited formerly called Simply Blue Energy (Scotland) Limited), a joint venture between Ørsted, Simply Blue Group and Subsea7.
Cumulative Effects	The combined effect of the Salamander Project with the effects from a number of different projects, on the same single receptor/resource.
Cumulative Impact	Impacts that result from changes caused by other past, present or reasonably foreseeable actions together with the Salamander Project.
Demersal species	Species living on or near the seabed.
Demersal Trawls	A funnel shaped net, with a closed end, towed behind a vessel with weights keeping the bottom edge of the net touching the seabed to target bottom dwelling species.
Design Envelope	A description of the range of possible elements that make up the Salamander Project design options under consideration, as set out in detail in the project description. This envelope is used to define the Salamander Project for Environmental Impact Assessment (EIA) purposes when the exact engineering parameters are not yet known.
Energy Balancing Infrastructure (EBI)	Energy Balancing Infrastructure which will provide services to the electrical grid, such as storing energy to meet periods of peak demand and improving overall reliability, as well as additional services such as system monitoring and computing. EBI will be housed within buildings and / or containers will be co-located with the Onshore Substation.
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Environmental Impact Assessment (EIA)	A statutory process by which the potentially significant effects of certain 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 Environmental Impact Assessment (Scotland) Regulations (2017), including the publication of an Environmental Impact Assessment Report (EIAR).
EIA Regulations	The regulations that apply to this project are the Electricity Works (EIA) (Scotland) Regulations 2017, the Marine Works (EIA) (Scotland) Regulations 2017, the Marine

Term	Definition
	Works (EIA) Regulations 2007, and the Town and Country Planning (EIA) (Scotland) Regulations 2017.
Handlining	Fishing utilising hooks or longlines to directly capture target species.
Impact	An impact is considered to be the change to the baseline as a result of an activity or event related to the Salamander Project. Impacts can be both adverse or beneficial impacts on the environment and be either temporary or permanent.
Inter-Related Effect (or Inter Relationships)	The likely effects of multiple impacts from the proposed development on one receptor. For example, noise and air quality together could have a greater effect on a residential receptor than each impact considered separately.
Landfall	The generic term applied to the entire landfall corridor between Mean Low Water Spring (MLWS) tide and the Transition Joint Bay (TJB) inclusive of all construction works, including the offshore and onshore Export Cable Corridor, and landfall compound, where the offshore cables come ashore north of Peterhead.
Mobile Gear	Trawls, Beam Trawls, Dredges and other gear that is attached to a vessel which then manoeuvres to catch fish.
Offshore Array Area	The offshore area within which the wind turbine generators, foundations, mooring lines and anchors, and inter-array cables and associated infrastructure will be located.
Offshore Development	The entire Offshore Development, including all offshore components of the Project (WTGs, Inter-array and Offshore Export Cable(s), floating substructures, mooring lines and anchors, and all other associated offshore infrastructure) required across all Project phases from development to decommissioning, for which the Applicant is seeking consent.
Offshore Development Area	The total area comprising the Offshore Array Area and the Offshore Export Cable Corridor.
Offshore Export Cable(s)	The export cable(s) that will bring electricity from the Offshore Array Area to the Landfall. The cable(s) will include fibre optic cable(s).
Offshore Export Cable Corridor	The area that will contain the Offshore Export Cable(s) between the boundary of the Offshore Array Area and Mean High Water Springs (MHWS).
Otter Trawling	A widely used bottom-fishing gear that utilising flat plates called otter boards that spread the net horizontally in the water whilst the bottom of the net remains in contact with the seabed.



Term	Definition
Passive Gear	Stationary gear utilises equipment including pots, traps or hooks to captures fish or crustacean.
Pelagic species	Refers to species inhabiting the water column.
Pelagic Trawl	Utilises a cone shaped net hauled through the water targeting species at any depth between the surface and seabed.
Receptor (Offshore)	Any physical, biological or anthropogenic element of the environment that may be affected or impacted by the Salamander Project. Receptors can include natural features such as the seabed and wildlife habitats as well as man-made features like fishing vessels and cultural heritage sites.
Salamander Project	The proposed Salamander Offshore Wind Farm. The term covers all elements of both the offshore and onshore aspects of the project
Scallop dredging	Dredges are rigid nets that penetrate between 0-20 cm when towed along the seabed, to target shellfish, particularly scallops.
Scoping	An early part of the EIA process by which the key potential significant impacts of the Salamander Project are identified, and methodologies identified for how these should be assessed. This process gives the relevant authorities and key consultees opportunity to comment and define the scope and level of detail to be provided as part of the EIAR – which can also then be tailored through the consultation process.
Semi-Submersible	A Semi-Submersible structure is a buoyancy-stabilised platform which floats partially submerged on the surface of the ocean whilst anchored to the seabed. The structure gains its stability through the distribution of buoyancy force associated with its large footprint and geometry which ensures the wind loading on the structure and turbine are countered by an equivalent buoyancy force on the opposite side of the structure. Included in the Project Design Envelope, there are variations of the semi-submersible concept, such as barge, buoy, or hybrid.
Tension Leg Platform	A Tension Leg Platform is a semi-submerged buoyant structure, anchored to the seabed with tensioned mooring lines. The combination of the structure buoyancy and tension in the anchor/mooring system provides the platform stability. This system-driven stability (as opposed to the stability coming just from the floating substructure itself) allows for a comparatively smaller and lighter structure compared to Semi-Submersible equivalents.

## Acronyms

Term	Definition
AIS	Automatic Identification System
CBRA	Cable Burial Risk Assessment
CEA	Cumulative Effect Assessment
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CFP	Common Fisheries Policy
CNSE	Central North Sea Electrification Project
COLREGs	Convention on the International Regulations for Preventing Collisions at Sea
EBI	Energy Balancing Infrastructure
ECC	Export Cable Corridor
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMF	Electromagnetic Fields
EMODnet	European Marine Observation and Data Network
FIR	Fisheries Industry Representative
FLO	Fisheries Liaison Officer
FLOWW	Fishing Liaison with Offshore Wind and Wet Renewables Group
FMMS	Fisheries Management and Mitigation Strategy
ICES	International Convention for Exploration of the Seas
INTOG	Innovation and Targeted Oil and Gas

Term	Definition
MD-LOT	Marine Directorate – Licensing Operations Team
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMO	Marine Management Organisation
MPA	Marine Protected Area
MPCP	Marine Pollution Contingency Plan
MSS	Marine Scotland Science (now Marine Directorate Science)
N&ECRIFG	North and East Coast Regional Inshore Fisheries Group
NtM	Notice to Mariners
OAA	Offshore Array Area
O&M	Operation and Maintenance
OFLO	Offshore Fisheries Liaison Officer
OREI	Offshore Renewables Energy Installation
ScotMER	Scottish Marine Energy Research
SFF	Scottish Fishermen’s Federation
SOLAS	Safety of Life at Sea
SSC	Suspended Sediment Concentration
SWPC	Salamander Wind Project Company Limited (formerly called SBES)
STECF	Scientific, Technical and Economic Committee for Fisheries
SWFPA	Scottish White Fish Producers Association
TAC	Total Allowable Catch
TCA	Trade and Cooperation Agreement
UKHO	United Kingdom Hydrographic Office

Term	Definition
UXO	Unexploded Ordnance
VMP	Vessel Management Plan
VMS	Vessel Monitoring System
WTG	Wind Turbine Generator

## 13 Commercial Fisheries

### 13.1 Introduction

13.1.1.1 The Applicant, Salamander Wind Project Company Ltd. (SWPC a joint venture (JV) partnership between Ørsted, Simply Blue Group and Subsea7, is proposing the development of the Salamander Offshore Wind Farm (hereafter ‘Salamander Project’). The Salamander Project will consist of the installation of a floating offshore wind farm (up to 100 megawatts (MW) capacity) approximately 35 kilometres (km) east of Peterhead. It will consist of both offshore and onshore infrastructure, including an offshore generating station (wind farm), export cables to landfall, and connection to the electricity transmission network (please see **Volume ER.A.2, Chapter 4: Project Description** for full details on the Project Design).

13.1.1.2 This chapter of the Environmental Impact Assessment (EIA) Report (EIAR) presents the results of the EIA of potential effects of the Salamander Project on Commercial Fisheries. Specifically, this chapter considers the potential impact of the Salamander Project seaward of Mean High Water Springs (MHWS) during the construction, operation and maintenance, and decommissioning phases of the Offshore Development.

13.1.1.3 The chapter provides an overview of the existing environment for the proposed Offshore Development Area, followed by an assessment of significance of effect on Commercial Fisheries receptors, as well as an assessment of potential cumulative effects with other relevant projects and effects arising from interactions on receptors across topics. Both direct and indirect impacts will be assessed through established impact pathways. This holistic approach is taken throughout to accurately capture the likelihood and magnitude of potential changes to the baseline environment.

13.1.1.4 This chapter should be read alongside and in consideration of the following:

- **Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology;**
- **Volume ER.A.3, Chapter 9: Benthic and Intertidal Ecology;**
- **Volume ER.A.3, Chapter 14: Shipping and Navigation;**
- **Volume ER.A.3, Chapter 18: Other Users of the Marine Environment; and**
- **Volume ER.A.3, Chapter 19: Socio-economics, Tourism and Recreation.**

13.1.1.5 This chapter has been authored by Environmental Resources Management (ERM) Ltd. Further competency details of the authors of this chapter are outlined in **Volume ER.A.4, Annex 1.1: Details of the Project Team**.

### 13.2 Purpose

13.2.1.1 The primary purpose of this EIAR chapter is for the application for the Salamander Project satisfying the requirements of Section 36 of the Electricity Act 1989 and associated Marine Licences. This EIAR chapter describes the potential environmental impacts from the Offshore Development and assesses the significance of their effect.

13.2.1.2 The EIAR has been finalised following the completion of the pre-application consultation (**RP.A.4, Report 1: Pre-Application Consultation (PAC) Report**) and the Salamander EIA Scoping Report (SBES, 2023), and takes account of the relevant advice set out within the Scoping Opinion from Marine Directorate – Licensing Operations Team (MD-LOT) (MD-LOT, 2023) relevant to the Offshore Development. Comments relating to the Energy Balancing Infrastructure (EBI) will be addressed within the Onshore EIAR. The Offshore EIAR will accompany the application to MD-LOT for Section 36 Consent under the Electricity Act 1989, and Marine Licences under the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009.

- 13.2.1.3 This EIAR chapter:
- Outlines the existing environmental baseline determined from assessment of publicly available data, project-specific survey data and stakeholder consultation;
  - Presents the potential environmental impacts and resulting effects arising from the Salamander Project on Commercial Fisheries receptors;
  - Identifies mitigation measures designed to prevent, reduce, or offset adverse effects and enhance beneficial effects on the environment; and
  - Identifies any uncertainties or limitations in the methods used and conclusions drawn from the compiled environmental information.
- 13.2.1.4 The potential impacts on Commercial Fisheries have been assessed conservatively using realistic worst-case scenarios for the Salamander Project taken from the proposed project parameters. Where potential for impacts on Commercial Fisheries are identified, appropriate embedded or additional mitigation measures will be proposed to reduce impacts to non-significant levels.
- 13.2.1.5 The Commercial Fisheries Study Area for this assessment is defined in **Section 13.5** and illustrated in **Figure 13-1**. Detailed information on the proposed Salamander Project, found within **Volume ER.A.2, Chapter 4: Project Description** and **Table 13.8** describes the realistic worst-case project parameters.

### 13.3 Planning and Policy Context

- 13.3.1.1 The preparation of the Commercial Fisheries chapter has been informed by the following policy, legislation, and guidance, as outlined in **Table 13.1**. Details of Environmental Policy and Legislation relevant to both this Commercial Fisheries assessment and other EIAR chapters can be found in **Volume ER.A.2, Chapter 2: Legislative Context and Regulatory Requirements**.

**Table 13.1 Relevant policy, legislation and guidance relevant to the Commercial Fisheries assessment**

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**Relevant policy, legislation, and guidance**

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*Policy*

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Scotland's National Marine Plan (2015)

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Sectoral Marine Plan for Offshore Wind Energy (2019)

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National Planning Framework 4 (Scotland) (2023)

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*Legislation*

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Strategic Environmental Assessment Directive, SEA, European Union Requirement

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Marine and Coastal Access Act 2009

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Fisheries Act 2020

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Marine (Scotland) Act (2010)

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#### Relevant policy, legislation, and guidance

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The Conservation of Offshore Marine Habitats and Species Regulations 2017

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Conservation (Natural Habitats, &c.) Regulations 1994

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The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004

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The Sandeel (Prohibition of Fishing) (Scotland) Order 2024

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#### Guidance

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Guidance on Licensing and EIA requirements for offshore wind farms (Cefas, 2004)

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Fishing and Submarine Cables – Working Together (International Cable Protection Committee, Drew 2009)

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Best practice guidance for fishing industry financial and economic impact assessments (UK Fisheries Economics Network, 2012)

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Scottish Government and Xodus Group Limited (2022): Good Practice Guidance for Assessing Fisheries Displacement by Other Licensed Marine Activities (and associated Literature Review). These documents provide good practice guidance for assessing fisheries displacement by other licensed marine activities

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The North and East Coast Regional Inshore Fisheries Group (N&EC RIFG)'s Fisheries Management Plan 2019 (N&EC RIFG, 2019)

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Changes to Fish Practices around the UK as a Result of the Development of Offshore Windfarms – Phase One (Revised) (Gray *et al.*, 2016)

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Guidance on Commercial Fisheries Mitigation and Opportunities from Offshore Wind commissioned by Collaborative Offshore Wind Research into the Environment (COWRIE) (Blyth-Skyrme, 2010)

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Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine. CIEEM (2018)

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Guidance on Licensing and EIA requirements for offshore wind farms (Centre for Environment, Fisheries and Aquaculture Science (Cefas, 2004)

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Recommendations for positive interactions between offshore wind farms and fisheries. European Innovation Council and SMEs Executive Agency (European Commission) (Dupont *et al.*, 2020).

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Best Practice Guidance for Offshore Renewables Developments. Recommendations for Fisheries Liaison. FLOWW (Fishing Liaison with Offshore Wind and Wet Renewables Group) FLOWW 2014).

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Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Disruption Settlements and Community Funds. FLOWW (Fishing Liaison with Offshore Wind and Wet Renewables Group) (FLOWW 2015).

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Marine Scotland (now Marine Directorate) Consenting and Licensing Guidance for Offshore wind, wave and tidal energy applications: consenting and licensing manual. (Marine Scotland (now Marine Directorate), 2018)

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The North and East Coast Regional Inshore Fisheries Group (N&EC RIFG)'s Fisheries Management Plan 2019 (N&EC RIFG, 2019)

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### 13.1.1 Scotland’s National Marine Plan

- 13.3.1.2 The latest relevant legislation, policy and guidance documents have been reviewed and considered throughout this assessment. Those of relevance include Scotland’s National Marine Plan published by The Scottish Government (Marine Scotland (now Marine Directorate), 2015) and the National Planning Framework 4 (Scotland) (2023) published by The Local Government and Housing Directorate, which highlights the requirement of marine developers to consider potential impacts on fisheries interests and identify key concerns within the appropriate assessment. Best practice guidance from Marine Directorate, Centre for Environment, Fisheries and Aquaculture Science (Cefas) and Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) (see **Table 13.1**) will form the framework against which potential impacts including fisheries liaison, displacement or other disruptions will be considered.
- 13.3.1.3 In particular, aspects of Scotland’s National Marine Plan, such as Policies under Section 6 Sea Fisheries (FISHERIES 1-3) and General Policies GEN 1, GEN 4, and GEN 17 are relevant to this chapter.
- 13.3.1.4 Whilst the presence of the Offshore Array may disrupt trawling and dredging activities, other fisheries may benefit. For example, handlining and potting are already well established within the Commercial Fisheries Study Area and may be able to continue within the operational wind farm. The key concern is that navigational safety is not compromised. Elements of Scotland’s National Marine Plan incorporated within this EIAR chapter are presented in **Table 13.2**.

**Table 13.2 Sections of Scotland’s National Marine Plan relevant to the Commercial Fisheries assessment**

Reference	Policy Requirement	EIAR Reference
Fisheries 1	Taking account of the EU’s Common Fisheries Policy, Habitats Directive, Birds Directive and Marine Strategy Framework Directive, marine planners and decision makers should aim to ensure (a) existing fishing opportunities and activities are safeguarded wherever possible.	Steps taken to safeguard fishing activities discussed within <b>Section 13.8.3</b> Embedded Mitigations.
	(b) An ecosystem-based approach to the management of fishing which ensures sustainable and resilient fish stocks and avoids damage to fragile habitats.	This chapter is informed by <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> and <b>Volume ER.A.3, Chapter 9: Benthic and Intertidal Ecology</b> , and considers sustainably resilient fish stocks and damage to fragile habitats.
	(c) That other sectors take into account the need to protect fish stocks and sustain healthy fisheries for both economic and conservation reasons.	Potential impacts on fish stocks and economics are discussed in <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> and <b>Volume ER.A.3, Chapter 19: Socio-economics, Tourism and Recreation</b> .
	(d) Mechanisms for managing conflicts between fishermen and/or between the fishing sector and other users of the marine environment.	Consultation with Fishers to understand and manage conflicts described in <b>Section 13.4</b> .



Reference	Policy Requirement	EIAR Reference
Fisheries 2	Key factors (as listed in Scotland’s National Marine Plan) should be taken into account when deciding on uses of the marine environment and the potential impact on fishing. These include:	Impacts to commercial fisheries are assessed in <b>Section 13.11</b> .
	The cultural and economic importance of fishing, in particular to vulnerable coastal communities	The cultural importance of commercial fishing has been acknowledged in consultation ( <b>Section 13.4</b> ) and considered within the impact assessment ( <b>Section 13.11</b> ). In addition, consideration of wider cultural impacts on tourism and commercial fisheries is made in <b>ER.A.3, Chapter 19: Socio-economics, Recreation and Tourism</b> . The economic importance of commercial fishing has been established within the baseline environment ( <b>Section 13.7</b> ) and the economic implications of the Salamander Project are considered within the impact assessment ( <b>Section 13.11</b> ).
	The potential impact (positive and negative) of marine developments on the sustainability of fish and shellfish stocks and resultant fishing opportunities in any given area s.	Adverse and beneficial impacts are considered in depth, including displacement of vessels which may have implications for the sustainability of stock in <b>Section 13.11</b> . The sustainability of fish and shellfish are considered in greater depth within <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> .
	The environmental impact on fishing grounds (such as nursery, spawning areas), commercially fished species, habitats and species more generally.	Considered within <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> .
	The potential effect of displacement on: fish stocks; the wider environment; use of fuel; socio-economic costs to fishers and their communities and other marine users.	The potential impact of displacement, including indirect impacts are addressed in <b>Section 13.11</b> . The use of fuel is considered as a potential impact in its own right “Increased steaming times”.
Fisheries 3	Where existing fishing opportunities or activity cannot be safeguarded, a Fisheries Management and Mitigation Strategy (FMMS) should be prepared by the Proposer of the development involving full engagement with local fishing interests (and other interests as appropriate) in the development of the Strategy. The content of the Strategy should be relevant to the particular circumstances and could include:	Discussed in <b>Section 13.8.3</b> Embedded Mitigation and presented in <b>Volume ER.A.6, Plan P.3: Fisheries Management and Mitigation Strategy (FMMS)</b> .

Reference	Policy Requirement	EIAR Reference
	An assessment of the potential impact of the development or use on the affected fishery or fisheries, both in socio-economic terms and in terms of environmental sustainability.	The economic impacts on key receptor groups are discussed in <b>Section 13.7</b> and wider within the impact assessment itself. Consideration of wider cultural impacts on tourism and commercial fisheries is made in <b>ER.A.3, Chapter 19: Socio-economics, Recreation and Tourism</b> .
	A recognition that the disruption to existing fishing opportunities/activity should be minimised as far as possible.	Discussed within <b>Section 13.8.3</b> Embedded Mitigation, and will be presented in full in the FMMS post-consent.
	Reasonable measures to mitigate any constraints which the proposed development or use may place on existing or proposed fishing activity.	Embedded mitigation measures relevant to commercial fisheries are outlined within <b>Section 13.8.3</b> .
	Reasonable measures to mitigate any potential impacts on sustainability of fish stocks (e.g. impacts on spawning grounds or areas of fish or shellfish abundance) and any socio-economic impacts.	As above and addressed within <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> and <b>Volume ER.A.3, Chapter 19: Socio-economics, Tourism and Recreation</b>
GEN 4	Co-existence: Proposals which enable coexistence with other development sectors and activities within the Scottish marine area are encouraged in planning and decision-making processes, when consistent with policies and objectives of the Plan.	Discussed within <b>Section 13.8.3</b> Embedded Mitigation and will be presented in full in the FMMS post-consent.
Section 6 – Sea Fisheries  Part 3 Key issues for marine planning, interactions with other users  Paragraphs 6.22 to 6.26	<p>Development: Energy developments can displace fishing. The cabling arrays associated with energy and telecoms developments, and other physical infrastructure associated with development, have the potential for short-term displacement of fishing activity during the installation phase.</p> <p>There is also potential for damage to occur to both infrastructure and fishing equipment as a result of interactions, with obvious safety implications. New developments should take into account the intensity of fishing activity in the proposed development area and any likely displacement which the development and associated activity could precipitate, with resultant increased pressure on remaining, often adjacent, fishing grounds.</p> <p>Where relevant, FLOWW Best Practice Guidance for Offshore Renewables Developments:</p>	<p>Potential displacement effects on commercial fisheries as a result of the Salamander Project are assessed for each project phase in <b>Section 13.11</b>.</p> <p>Potential safety issues that may arise by fishing activity as a result of the Salamander Project, i.e. via snagging or entanglement of fishing gear, are assessed for each project phase in <b>Section 13.11</b>.</p> <p>As per <b>Table 13.1</b>, FLOWW Best Practice Guidance is followed.</p>

Reference	Policy Requirement	EIAR Reference
	<p>Recommendations for Fisheries Liaison should be followed.</p>	
<p>Section 6 – Sea Fisheries</p> <p>Part 3 Key issues for marine planning, interactions with other users</p> <p>Paragraphs 6.33 to 6.37</p>	<p>Displacement: Displacement of fishing activity can occur as a result of interactions with other marine activities (whether commercial or conservation based); closing areas to fishing; or restricting fishing vessels’ access to areas. Displacement of fishing effort has a number of features that require careful consideration.</p> <p>Displaced effort may move to areas that are already fished but where the fishing pressure is then greater than otherwise would have been the case. This could be a concern if this results in a greater impact on recovery of fish stocks or increased pressure on fish stocks or damage to the environment.</p> <p>Displaced effort may also impact on grounds that previously have not experienced any fishing effort. These areas can be readily identified in the offshore fisheries by vessel monitoring systems. The displaced activity may have a new and unknown environmental impact on these areas.</p> <p>There may be socio-economic effects associated with displacement, such as new grounds being less profitable for fishermen; beyond the capacity of some vessels; and/or unable to provide the mix of species on which current business models rely. Displacement may also cause crowding of fishing effort in remaining established fishing areas, or increased fuel use and fuel costs arising from having to travel further and make fishing less economically sustainable.</p>	<p>Potential displacement effects on commercial fisheries as a result of the Salamander Project are assessed for each project phase in <b>Section 13.11</b>.</p>

13.3.1.5 Further details on the requirements for EIA are presented in **Volume ER.A.2, Chapter 2: Legislative Context and Regulatory Requirements**.

## 13.4 Consultation

- 13.4.1.1 Consultation is a key part of the application process. It has played an important part in ensuring that the baseline characterisation and impact assessment is appropriate to the scale of development as well as meeting the requirements of the regulators and their advisors.
- 13.4.1.2 An overview of the Salamander Project consultation process is outlined in **Volume ER.A.2, Chapter 5: Stakeholder Consultation**. Consultation regarding Commercial Fisheries has been conducted through the standard EIA scoping process, as well as via meetings and through Commercial Fisheries questionnaire responses. It should be noted that feedback received during consultation with the Scottish Fishermen's Federation (SFF) and Scottish White Fish Producers Association (SWFPA) was fed into the site selection process; site refinement was heavily influenced in this regard to ensure avoidance of high intensity fishing grounds. Further detail on this early site selection process, and how this was managed to mitigate against potential impacts on commercial fisheries receptors is provided in **Volume ER.A.2, Chapter 3: Site Selection and Consideration of Alternatives**.
- 13.4.1.3 The Salamander Project has met regularly with the SFF, the SWFPA and North and East Coast Regional Inshore Fisheries Group (N&ECRIFG) on an almost monthly basis since June 2022 to provide updates on the Salamander Project, and to discuss any matters of relevance to either the Salamander Project or the commercial fisheries industry and has also received feedback from a number of individual vessel owners (via the Commercial Fisheries questionnaires). Responses received during consultation and additional data, including gear types and fishing ground data, provided by SFF, SWFPA, N&ECRIFG and individual vessel owners have been used to inform the baseline for assessment within the EIAR.
- 13.4.1.4 The issues raised during consultation specific to Commercial Fisheries are outlined in **Table 13.3**, including consideration of where the issues have been addressed within the EIAR. This includes key comments received in Commercial Fisheries questionnaire responses. It should be noted that although questionnaire responses were received from several individual vessel owners, apart from relevant baseline information as noted above, these did not include any information that could be used to inform the assessment approach within this EIAR chapter. As such, there is no line item within **Table 13.3** specific to these individuals.

Table 13.3 Consultation responses specific to the Commercial Fisheries topic

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
Scottish Fishermen’s Federation (SFF)	21 June 2023; comments on EIA Scoping Report	<p>Page 18, of the report notes that “There is now no offshore substation planned as part of the Salamander Project, and that is therefore not considered further within the Scoping Report.”</p> <p>In any case, if there are no offshore substations page 32 tell us that there will be subsea hub(s) and/or joint(s); therefore, they need to be scoped.</p>	Subsea hub(s) and/or joint(s) are considered within <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	Considering the spatial footprint of floating substructure, SFF prefers TLP to be used instead of semi-submersible and barge. Given that the development cannot say which mooring and anchor system they choose all of them must be scoped in.	Both the semi-submersible and Tension Leg Platform (TLP) options for the floating substructures are still included within the Project Design Envelope. Impacts of both floating substructure options are considered within <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	P41, para “4.4.4 Offshore Cables”, the report states that the Salamander Project may choose to trench and/or bury the portions of the cable running along the seabed for their protection. The burial method and target burial depth will be defined post consent based on a Cable Burial Risk Assessment (CBRA) (or similar) considering ground conditions as well as the potential for impacts upon cables such as from trawling and vessel anchors. The report adds that the burial depths are typically 1 – 2 m, with a maximum of up to 4 m locally; this will vary across the Salamander Project array area and offshore cable corridor. In addition, while crossing other ECC or pipeline, it should be ensured that no snagging hazard is created for the fishing vessels.	Snagging hazards are fully assessed within <b>Section 13.11</b> .

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
	21 June 2023; comments on EIA Scoping Report	SFF, to ensure the safety of fishing vessels and prevention of the ECC EMF effects on marine environment, expect the total burial of the cables and a CBRA should be prepared and agreed preconsent. Furthermore, SFF expect that an agreed over trawl on the ECC is carried out as soon as possible post burial to ensure safety of fishing vessels and cables.	<p>The Salamander Project will aim to install the Offshore ECC to a minimum target depth of lowering of 0.6 m, where technically feasible. The final burial method and target burial depth will be defined post-consent based on a Cable Burial Risk Assessment (CBRA) (or similar) considering ground conditions and the potential impacts on cables from trawling, vessel anchors, etc. The Salamander Project notes the request for an over trawl survey; however, the project will provide a summary of the post-installation burial survey results, confirming the depth of burial which has been achieved during cable installation along the Offshore ECC at the point of survey.</p> <p>It should be noted that the embedded mitigation of cable burial is to mitigate risk to project infrastructure from fishing activity interacting with the seabed, rather than to provide a mitigation for potential EMF effects. Fishing gear penetrates up to 0.3 m, so a minimum depth of lowering of 0.6 m mitigates for safety in alignment with Carbon Trust guidelines for Cable Burial Risk Assessment. Effects of EMF are considered in <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b>.</p>
	21 June 2023; comments on EIA Scoping Report	P47, para “4.6 Construction Activities”, indicates the construction period will last for almost 3 years. SFF recommend that in case construction sites lapse with fish spawning and nursery areas, it should be made sure that construction activities are carried out outwith the spawning and nursery seasons to prevent any disruption and/or damage fish spawning and nursery.	Potential Impacts on fish spawning areas are discussed within <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> .

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
	21 June 2023; comments on EIA Scoping Report	SFF is content with the removal of obstacles such as Unexploded Ordnance (UXO) and discarded fishing gear to shore; however, in terms of boulders it is recommended that utmost effort should be made to not displace boulders. Displaced/relocated boulders creates snagging hazard for the fishing vessels and disturbs the marine environment. If displacement of boulders is the last resort for cable burial, it is recommended that the new location of the boulders is recorded and shared with SFF/fishing industry via USB flash sticks. In addition, if further large-scale boulders are identified during the survey work, SFF would like to know their location the same manner as the relocated boulders.	Potential snagging hazards and mitigation are assessed in <b>Section 13.11</b> .  The Salamander Project may be able to provide locations for picked and relocated boulders; however, this will be dependent on the method/technology used for boulder removal. It is also noted that if locations were to be provided by the Salamander Project, these would correspond with the locations of the boulders at the time of relocation; these may subsequently move through bed load transport. An updated assessment will be undertaken and navigational considerations will be fully considered.
	21 June 2023; comments on EIA Scoping Report	P59, “4.8.1 Floating Assembly”, indicates that where piled anchors have been used these would likely be cut approximately 1 m below the seabed, with due consideration made of likely changes in seabed level and only the upper section removed. At this point in time, it is not thought to be reasonably practicable to remove entire piles from the seabed, but endeavours will be made to ensure that the sections of pile that remain in the seabed are fully buried.  SFF, taking the nature of the seabed soil into account, SFF would hope to see them cut out as deep as possible and fully buried in to mitigate any possible scour and snagging hazard happening.	This point is acknowledged. Assessment within this EIAR is based on the realistic worst-case scenario, i.e. piles are cut at approximately 1 m below the seabed. The Energy Act (2004) requires a Decommissioning Programme must be submitted and approved. This document will be updated during the Salamander Project’s lifetime to take account of changing best practice and new technologies. Although full details of decommissioning and best practices that will apply at the time of decommissioning are not currently known, the approach and methodologies employed will be compliant with the legislation and policy requirements at that time. An updated assessment will be made and navigational considerations will be fully considered at that time.
	21 June 2023; comments on EIA Scoping Report	SFF is not content with cable rock protection being left <i>in situ</i> and would prefer full removal of cable and rock where possible. However, SFF will accept the trenched and buried cable being left <i>in situ</i> if cable ends properly cut, sealed and securely buried. The SFF would reiterate	This will be considered within the Decommissioning Programme. Details of this are not currently known in full at this stage in the

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
		<p>the desire for clean seabed returned to as pre-development upon decommissioning, especially the rock protections.</p> <p>Furthermore, SFF expect the developer to commit/accept responsibility for the long-term monitoring of anything left in seabed post decommissioning to ensure safety of fishing vessels.</p>	Salamander Project design. However, the realistic worst-case scenario is assessed in <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	SFF will not be content with using concrete mattress on ECC protection in open sea. SFF want to see the scoping of the cables where they are not buried.	Risks associated with unburied cables are fully assessed within <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	SFF consider the possibility that the Salamander Project will negatively impact the local fishermen in terms of employment and income source. There is the chance that this will badly impact the education, lifestyle, and community identity of them. Therefore, SFF would want to see these scoped in in order to understand any possible negative impacts.	Socio-economic impacts, such as employment, education, lifestyle, and community identity in the fishing industry are assessed within <b>Volume ER.A.3, Chapter 19: Socio-economics, Tourism and Recreation</b> , with potential supply chain benefits to the fishing industry assessed within <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	<p>Experience tells us that post consent is too late to agree much of the mitigation; therefore, it needs to be agreed pre-consent.</p> <p>In addition, the SFF noted that the Salamander Project may have negative impact on commercial fisheries; therefore, simply to say “the new jobs” is not enough. SFF would expect to see the development scoping where the new jobs are created and ensure that they do not replace fishing jobs. For the SFF it is recognised that for every job offshore there are five jobs onshore which has not been considered.</p>	<p>Embedded mitigation is outlined in <b>Table 13.7</b> and specific mitigation will be agreed within the Fisheries Management and Mitigation Strategy (FMMS); an Outline FMMS has been submitted as part of the Salamander Project’s offshore application, <b>Volume ER.A.6, Plan P.3: Fisheries Management and Mitigation Strategy</b>.</p> <p>Job creation, for both onshore and offshore involvement in the fishing industry, is assessed within <b>Volume ER.A.3, Chapter 19: Socio-economics, Tourism and Recreation</b>.</p>



Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
	21 June 2023; comments on EIA Scoping Report	The SFF agree that all potential receptors and impacts have been identified for commercial fisheries and would expect to see the baseline for commercial fishery in place in order to monitor the impact for the life-time of the project.	This is noted.
	21 June 2023; comments on EIA Scoping Report	SFF recommends that the “Socio-cultural effects” and “Distributional effects” to be scoped in since the development will have impacts on both them.	Consideration of wider cultural impacts from the Salamander Project on tourism and commercial fisheries is made within <b>Volume ER.A.3, Chapter 19: Socio-economics, Tourism and Recreation</b> . Distributional effects are assessed within this chapter and captured within assessment of ‘ <i>displacement of fishing activity into other areas</i> ’.
	21 June 2023; comments on EIA Scoping Report	SFF believe that the “Impact to habitats or species as a result of pollution or accidental discharge” during operation and maintenance should be scoped in and monitored.	Impacts associated with accidental pollution on fish stocks and alteration to habitat are fully assessed within <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> and <b>Volume ER.A.3, Chapter 9: Benthic and Intertidal Ecology</b> .
	21 June 2023; comments on EIA Scoping Report	Boulders displacement should also be scoped in.	Impacts associated with boulder displacement and the potential snagging risks associated are assessed in <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	The developers will be able to deduce the size and impacts of all ScotWind projects and they could scope in the worst-case scenario.	Realistic worst-case scenarios are used in all instances to assess impacts, including cumulative impacts, assessed in <b>Section 13.13</b> .
Green Volt Offshore Wind	21 June 2023; comments on EIA Scoping Report	Offshore Aspects  In addition to the Green Volt offshore export cable route being <1 km from the Salamander Offshore Wind Farm site, the two projects have	Increased vessel traffic due to the Salamander Project’s infrastructure is discussed fully within <b>Volume ER.A.3, Chapter 18: Other Users of the Marine Environment</b> .

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
		identified a similar landfall location. Green Volt’s primary option (St Fergus South) is in the vicinity of the Salamander project proposed landfall at Scotstown Beach between Lunderton and Kirkton. Therefore, there is the potential for interactions between the two project’s offshore export cable corridors, including possible cable crossings	
Dee DSFB	21 June 2023; comments on EIA Scoping Report	We welcome the addition of a section on potential cumulative impacts of the development given its proximity to neighbouring developments. We would recommend as we have done for previous developments that further consultation takes place with Marine Directorate Science and Fisheries Management Scotland with reference to broadening our understanding of any potential impact upon diadromous fish because of this proposed development. Specifically feeding into the ScotMER Diadromous Fish Specialist Receptor Group where a series of evidence gaps have been identified in relation to diadromous fish.	The Applicant acknowledges the importance of broadening our understanding of how offshore wind developments may impact diadromous fish populations. In recognition of this, Ørsted fully funds the PREDICT project – a three-year research initiative led by experts at the University of Aberdeen and University of the Highlands and Islands’ Environmental Research Institute to develop understanding of fish migration patterns and how these can be better monitored. The ultimate goal is to improve understanding of how to site offshore wind farms to minimise any impact on fish and their predators (birds and marine mammals). As an extension of this work, the Salamander Project will install sensors at and near the site during the development, construction and operational stages of the wind farm to gather data on fish stocks. Impacts associated with fish stocks and alteration to habitat are fully assessed within <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> .
Marine Scotland Science (was MSS at the time, now	21 June 2023; comments on EIA Scoping Report	Data Sources  MSS recommend that the MMO Fisheries Statistics should be used to inform the baseline for commercial fisheries. The Scottish Sea Fisheries Statistics also provide similar data, although the MMO Fisheries	This has been addressed within the data utilised to evaluate the baseline. Data sources can be found in <b>Table 13.4</b> .

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
Marine Directorate (Science)		<p>Statistics are preferable, as explained in the Good Practice Guidance. Currently neither of these sources are listed within the data sources table (Table 9-1). The MMO Fisheries Statistics includes data for vessels 10 m and over, whereas the 2018 MMO dataset referred to in the data sources table is for vessels 15 m and over only. Furthermore, both of these datasets have data available up to 2021, which is more up to date than the 2018 dataset. The link for the data source “Fishing – tonnage, effort and value change- Shellfish, Pelagic and Demersal (also with vessels of 10 m length) from 2017 – 2021” in the data table does not work, and it is unclear which data set this is. MSS recommend that this is clarified in the EIA.</p>	
	21 June 2023; comments on EIA Scoping Report	<p>MSS advise that AIS data from EMODnet referred to in the Good Practice Guidance should be used for the assessment, rather than the 2019 MMO AIS dataset listed, as this will provide more up to date data.</p>	<p>AIS Figures not utilised here as many of the tracks are simply vessels transiting through as opposed to fishing activities.</p>
	21 June 2023; comments on EIA Scoping Report	<p>MSS note the inclusion of the ScotMap data and advise that this dataset should not be relied upon to provide information on the commercial fisheries baseline for the inshore fleet as it is out of date. MSS recommend this dataset is used as a starting point and that consultation should be the primary source of information for the under-10 m fleet.</p>	<p>This data has been used to inform the recent past of the Study Area, although has not been utilised within the assessment.</p> <p>Questionnaires were issued to commercial fisheries stakeholder groups and individual vessel operators. The responses to these questionnaires have been fed into assessment, and the relevant responses were used as the primary source of information for the under-10 m fleet.</p>
	21 June 2023; comments on EIA Scoping Report	<p>MSS note that the Vessel Monitoring Systems (VMS) dataset have been used to produce figures for average VMS value. MSS advise that the VMS dataset is also used to produce figures presenting the fishing</p>	<p>Annual VMS data has been considered independently to consider temporal changes in fishing activities, see <b>Section 13.7</b>.</p>

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
		effort (Kw per hour) for UK vessels, which will provide further information about the commercial fisheries baseline.	
	21 June 2023; comments on EIA Scoping Report	<p>Potential Impacts and Scoping</p> <p>MSS do not agree that all impacts have been presented and scoped in within Table 9-3. In general the impacts require more clarity in the scoping justification column and the table was hard to follow due to inconsistencies.</p>	Further clarity has been added in <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	<p>MSS note that the first impact in the table refers only to the loss of access to fishing grounds due to presence of vessels and safety zones. The justification states this is a temporary restriction of access to fishing grounds. MSS advise that this impact should also include the loss of access to fishing grounds due to the presence of the turbines in the array area, and that this has the potential to be a long term and potentially permanent restriction for fishing activity, not temporary. Long term restriction of access is mentioned in the "Increased steaming times" impact justification, and the displacement caused by these long term loss of grounds is covered under the 6<sup>th</sup> impact in the table, but the actual loss of grounds has not been listed as an impact.</p>	Noted and discussed in <b>Section 13.11</b> . Assessment is based on the assumption that the presence of the Offshore Array may disrupt trawling and dredging activities, suggesting that they will not be able to be operate safely within the OAA, for the duration of the operational phase. However, handlining and potting are already well established within the Commercial Fisheries Study Area and may be able to continue to fish within the operational wind farm. This has been noted in <b>Table 13.8</b> .
	21 June 2023; comments on EIA Scoping Report	The impact 'Displacement of fishing activity into other areas' refers to temporary displacement during construction and decommissioning in both the offshore array and the cable corridor. However, the 6 <sup>th</sup> impact in the table which covers displacement during the operation and	Any maintenance on the offshore export cable(s) during the Operation and Maintenance (O&M) phase is scoped in and assessed in <b>Section 13.11</b> .

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
		maintenance phase refers only to the offshore array. MSS advise this is changed to also scope in displacement in the cable corridor during the operation and maintenance phase.	
	21 June 2023; comments on EIA Scoping Report	The impact 'interference with fishing activity as a result of increased vessel traffic' is scoped in only for the construction and decommissioning phases, however the justification states this also relates to the operation and maintenance phase. MSS recommend that this is clarified, as this impact should be scoped in for the operation and maintenance phase as well	This impact is scoped in for all phases and assessed in <b>Section 13.11</b> .
	21 June 2023; comments on EIA Scoping Report	The impact 'Safety issues for fishing vessels' in both the offshore array and cable corridor is not scoped in for the operation and maintenance phase.	Safety issues are scoped in for all phases and assessed within <b>Volume ER.A.3, Chapter 14: Shipping and Navigation</b> .
	21 June 2023; comments on EIA Scoping Report	MSS note that the difference between the impact 'Increased steaming times' and the impact 'Obstruction of regular fishing vessel transit routes due to the presence of floating foundations and associated moorings' is unclear. MSS advise that the impact "Obstruction of regular fishing vessel transit routes..." is actually a cause for increased steaming times, alongside displacement of fishing activity, and as such should be part of the justification for "Increasing steaming times" rather than a separate impact.	Both impacts are covered under Increased Steaming Times, assessed in <b>Section 13.11</b> .
Marine Directorate – Licensing	21 June 2023; Scoping Opinion	With regard to the baseline data, the Scottish Ministers draw the Developer's attention to the advice from MSS and advise that the most recent datasets must be used. The Scottish Ministers recommend that all the data and guidance detailed in the MSS advice, including the MSS	Annual VMS data has been considered independently to consider temporal changes in fishing activities, see <b>Section 13.7</b> .

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
Operations Team (MD-LOT)		good practice guidance are fully considered in the EIA Report. Further to this clarity must be provided regarding the data source for – ‘Fishing – tonnage, effort and value change- Shellfish, Pelagic and Demersal (also with vessels of 10 m length) from 2017 – 2021’ in Table 9-1 as the link provided does not appear to work.	Policy, legislation and guidance relevant to this chapter are presented in <b>Table 13.1</b> and data sources utilised are presented in <b>Table 13.4</b> .
	21 June 2023; Scoping Opinion	The Developer summarises potential impacts of the project in Table 9-3 of the Scoping Report. All impacts identified by the Developer are proposed to be scoped in for assessment within the EIA Report. The Scottish Ministers do not agree that all impacts have been presented and scoped in within the table and advise that MSS advice must be fully considered and addressed by the Developer. The Developer is also directed to the advice from the MAU in relation to socio-economic impacts which is discussed in more detail in Section 5.14.2 of this Scoping Opinion.	Impacts scoped into the assessment are analysed within <b>Section 13.11</b> .  Socio-economic impacts are assessed fully in <b>Volume ER.A.3, Chapter 19: Socio-economics, Recreation and Tourism</b> .
	21 June 2023; Scoping Opinion	The Scottish Ministers advise that displacement of fishing activities in the cable corridor during the operational and maintenance phase should be scoped in. MSS advice supporting this must be fully considered and implemented by the Developer.	Displacement is fully assessed in all phases of the Salamander Project lifecycle in <b>Section 13.11</b> .
	21 June 2023; Scoping Opinion	With regard to the impact ‘interference with fishing activity as a result of increased vessel traffic’ the Scottish Ministers agree with MSS advice that this impact should be scoped in for the operational and maintenance phase as well as the construction and decommissioning phase.	This impact is scoped in for all phases and assessed in <b>Section 13.11</b> .

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
	21 June 2023; Scoping Opinion	The Scottish Ministers advise that the impact ‘safety issues for fishing vessels’ in both the offshore array and cable corridor must be scoped in for the operational and maintenance phase. This is supported by MSS advice and must be fully considered and implemented by the Developer.	Safety for fishing vessels is scoped in for the O&M phase and assessed within <b>Volume ER.A.3, Chapter 14: Shipping and Navigation</b> .
	21 June 2023; Scoping Opinion	The Scottish Ministers agree with MSS advice that ‘obstruction of regular fishing vessel transit routes due to the presence of floating foundations and associated moorings’ is actually a cause for increased steaming times, alongside displacement of fishing activity and advise that MSS advice and recommendations here must be fully considered and implemented by the Developer.	Increased steaming due to Salamander Project infrastructure and displacement are assessed separately in <b>Section 13.11</b> .
NatureScot	21 June 2023; comments on EIA Scoping Report	Wet storage  Section 4.6.2 (Floating Substructures) refers to the potential for wet storage of the substructures prior to their installation within the array area, either at the initial assembly site, the wind turbine integration site or a separate dedicated storage location. Section 4.7.1 (Floating Assembly) also indicates that once operational the substructures and WTGs will form an integrated assembly piece – the replacement of any major component parts of which is expected to be achieved by towing the assembly to port. Wet storage could represent a significant impact. Consideration of the potential impacts on all receptors needs to be addressed with the EIAR and HRA. We would welcome further discussion on this as and when further details are confirmed, noting	Wet storage of the floating substructures (and integrated WTGs) prior to tow-out to the OAA is considered to be outside the scope of this EIA and the Marine Licence applications for the Offshore Development. This is due to the fact that at this stage of the Salamander Project it is not known which port(s) will be used for wet storage and therefore it is challenging to undertake a meaningful assessment of impacts related to wet storage. The intent is that the Salamander Project will utilise the services of a port(s) that offer wet storage sites, which will have appropriate consents (obtained by the port authority) for wet storage of floating substructures, fabrication and assembly with the WTGs. To enable the availability of this option for the Salamander Project within the required timeframe, an owner of SWPC is an official member of the TS-FLOW UK-North Joint Industry Project (JIP) exploring the challenges of wet storage and identifying the opportunities and potentially

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
		the intention to seek a separate marine licence application for any requirements for wet storage outwith the array area.	<p>suitable locations for these activities. This JIP is in collaboration with relevant ports and other floating offshore wind developers.</p> <p>Separate Marine Licences and associated impact assessments for wet storage areas outwith the Offshore Development Area will be applied for and undertaken as appropriate.</p>
SWFPA  Mallaig and Northwest Fishermen's Association Ltd (MNWFA)	October 2023; Response to Questionnaire	Data gaps are only evident in the inshore areas vessels less than 12 m in length, however this questionnaire is for over 15 m the SWFPA are comfortable that the data highlighted is as accurate as could be deemed possible with current data sets available.	This has been addressed within the data utilised to evaluate the baseline.
		Fishermen's data which has been shared with the Salamander Project by the SFF has been taken into consideration.	
		In the array area itself it would be a positive step to avoid any scallop beds however, touchdown points of the anchor patterns could prove difficult fishing within the array area given the current mooring technology.	
Given that Salamander is a floating OWF with Catenary mooring system, fishing within the array will be extremely difficult if not impossible. Distance between turbines are not the issue, the distance between anchor touch down points are the problem.			
		If anchor touchdown points were at a suitable distance apart– i.e., 800 – 1000 m apart then some methods of fishing could resume if array	

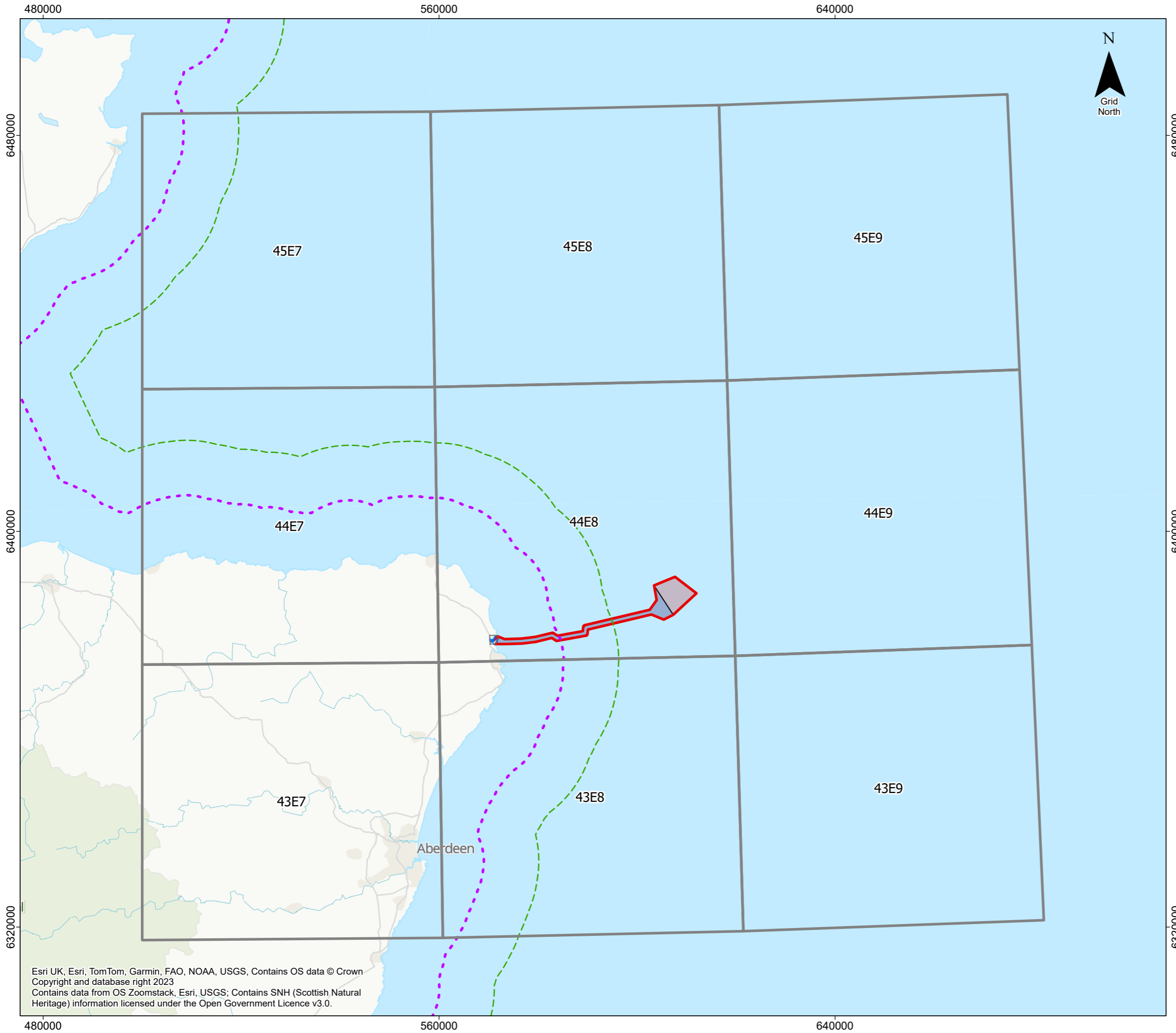


Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
		<p>cables were suitable buried, and dynamic cabling touchdown was within the touch down point of anchor chains.</p> <p>Membership vessels working range could be from 10 nautical miles (nm) to 500 nm dependant on vessel size.</p>	
SFF	October 2023; Response to Questionnaire	<p>Data gaps are only evident in the inshore areas vessels less than 12 m in length, however this questionnaire is for over 15 m the SFF are comfortable that the data highlighted is as accurate as could be deemed possible with current data sets available.</p> <p>Fishermen’s data which has been shared with the Salamander Project by the SFF has been taken into consideration.</p> <p>In the array area itself it would be a positive step to avoid any scallop beds however, touchdown points of the anchor patterns could prove difficult fishing within the array area given the current mooring technology.</p> <p>Given that Salamander is a floating OWF with Catenary mooring system, fishing within the array will be extremely difficult if not impossible. Distance between turbines are not the issue, the distance between anchor touch down points are the problem.</p> <p>If anchor touchdown points were at a suitable distance apart i.e., 800 – 1000 m apart then some methods of fishing could resume if array</p>	<p>This has been addressed within the data utilised to evaluate the baseline.</p> <p>Risks associated with anchor snagging are fully assessed within <b>Section 13.11.</b></p>

Consultee	Date and Forum	Comment	Where it is addressed within this EIAR
		<p>cables were suitable buried, and dynamic cabling touchdown was within the touch down point of anchor chains.</p> <p>Membership vessels working range could be from 10 nm to 500 nm dependant on vessel size.</p>	
<p>North &amp; East Coast Regional Inshore Management Group</p>	<p>October 2023; Response to Questionnaire</p>	<p>As we know there are data gaps in the inshore areas vessels less than 12 m in length which hopefully through the modernisation programme will be addressed. Having Fisheries Industry Representatives (FIRs) out speaking to fishermen is the best way to gather info on the under 12s.</p>	<p>This has been addressed within the data utilised to evaluate the baseline.</p>

## 13.5 Study Area

- 13.5.1.1 The Commercial Fisheries Study Area has been defined on the basis of International Council for the Exploration of the Seas (ICES) Statistical Rectangles. These standardised areas of sea are approximately 30 x 30 nautical miles (nm), the smallest spatial units recognised by the Marine Management Organisation (MMO) and the European Union (EU) for the calculation of fisheries statistics and stock estimates.
- 13.5.1.2 The Salamander Project, including the OAA and Offshore ECC is entirely within ICES Rectangle 44E8. The Offshore ECC extends from the far southwest of 44E8, meeting the OAA at the southeastern corner of the rectangle. The main emphasis of this chapter is therefore focused on 44E8. However, to attain a contextual understanding of the Offshore Development, adjacent ICES Rectangles are considered for completeness, and to capture the character of local fisheries in the surrounding seascape. Therefore, the Commercial Fisheries Study Area is defined as ICES Rectangle 44E8 where the Offshore Development is situated and adjacent ICES Rectangles including: 45E7, 45E8, 45E9, 44E7, 44E8, 44E9, 43E7, 43E8 and 43E9.
- 13.5.1.3 The main ports within the local area are Peterhead and Fraserburgh. Although smaller ports are also considered where catch from the Study Area is landed.
- 13.5.1.4 Given the low resolution of ICES fisheries data, it is recognised that descriptors of fishing within each ICES Rectangle represents an average value, that is unable to truly capture the heterogeneity of activity level and type within the rectangle and throughout the Study Area. Acknowledging this inherent limitation, further data, such as VMS will be utilised where available to provide the most accurate representation possible.
- 13.5.1.5 The Study Area for Commercial Fisheries is shown in **Figure 13-1**. As well as the Commercial Fisheries Study Area, the following are also referred to in the Commercial Fisheries chapter and shown on **Figure 13-1**:
- Offshore Array Area;
  - Offshore Export Cable Corridor; and
  - Offshore Development Area.

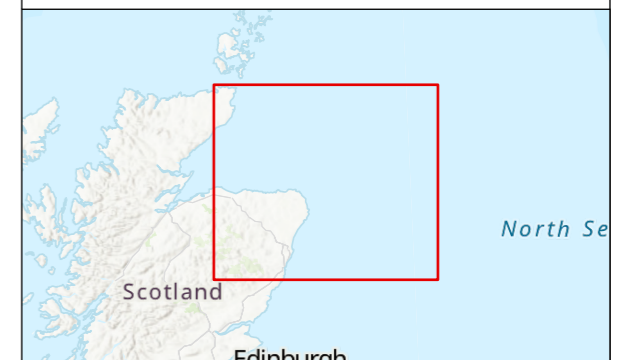


# Salamander

## Figure 13-1

Commercial Fisheries Study Area, including Offshore Development, Offshore Array Area & Offshore Export Cable Corridor. Composed of ICES Rectangles 45E7, 45E8, 45E9, 44E7, 44E8, 44E9, 43E7, 43E8 and 43E9

- Legend**
- Offshore Development Area
  - Offshore Array Area
  - Offshore Export Cable Corridor
  - Indicative Onshore Development Area
  - Commercial Fisheries Study Area
  - Onshore Scoping Area
  - 6nm limit
  - 12nm limit



Coordinate System: WGS 1984 UTM Zone 30N  
 Scale @ A3 : 1:750,000

0 20 40 Kilometers

0 5 10 20 Nautical Miles

Rev	Description	Date
01	Final Issue	27/03/2024
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Doc. Title : Commercial Fisheries Study Area  
 Doc. No : SWF01ER0334  
 Created by : NB  
 Checked by : IW  
 Approved by : AT



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## 13.6 Methodology to Inform Baseline

### 13.6.1 Site Specific Surveys

13.6.1.1 No site-specific surveys were undertaken for Commercial Fisheries within the Study Area to date. However, a desktop review has been completed utilising a variety of sources, as outlined below (**Table 13.4**) to provide information on relevant activities. Consultation with fishers and individual vessel owners has also taken place through bespoke questionnaires to provide further data and local knowledge to support the assessment.

### 13.6.2 Data Sources

13.6.2.1 The data sources that have been used to inform this Commercial Fisheries Chapter of the EIA Report are presented within **Table 13.4**. Data gaps and limitations of using data collated from various sources and collected with different purposes in mind are discussed and summarised in **Section 13.8**. A thorough understanding of limitations of the data and analysis that may result in data artefacts will enable a robust baseline for the assessment of potential impacts.

**Table 13.4 Summary of key publicly available datasets for Commercial Fisheries**

Source	Year	Spatial Coverage	Summary
MMO UK fleet landings by selected ICES Rectangle (MMO, 2023a)	2016-2022	Commercial Fisheries Study Area	This dataset provides a summary of activities for UK commercial fishing vessels categorised by ICES Rectangles and aggregated by month of landing, length of vessel and gear type used.
European Commission – Scientific, Technical and Economic Committee for Fisheries (STECF) non-UK landings by ICES Rectangle (STECF, 2017)	2010-2016	Commercial Fisheries Study Area	Fishing effort by hours, landings of international vessels.
MMO UK and foreign fleet landings into the UK by Port (MMO, 2023b)	2016-2022	Commercial Fisheries Study Area	UK and non-UK vessel landings (tonnes) into port.
MMO fishing activity data for UK vessels ( $\geq 15$ m), using Vessel Monitoring Systems (VMS) data (MMO, 2021)	2015-2020	Commercial Fisheries Study Area	This data set provides a summary of fishing activity for UK commercial vessels $>15$ m in length that are deemed to be active within a specified calendar year, aggregated by gear type.
Data from consultation with relevant stakeholders	2023	Commercial Fisheries Study Area	See <b>Section 13.4</b> for information on consultations. Providing data on gear types and active fishing locations, used to inform the baseline.
ScotMap	2007-2011	Commercial Fisheries Study Area	Spatial information on the fishing activities of Scottish registered commercial fishing vessels $<15$ m in overall length. Data was collected during face-to-face interviews with vessel owner and

Source	Year	Spatial Coverage	Summary
			represents the fishing activity from 2007-2011. Limitations to this data included 72% coverage of fishers, 90% earnings information and interpretation of their fishing distribution in relation to interview questions. <b>As this data is now considered out of date, it has been used as a starting point, but is superseded where other more up to date information is available.</b>
2021 European AIS Fishing Vessel Density Data	2022	Commercial Fisheries Study Area	Dataset showing AIS vessel density data for European fishing vessels, showing number of hours of activity per km <sup>2</sup> per month.
Gridded fisheries data within Scottish waters for Scottish fishing vessels <12 m length	2022	Commercial Fisheries Study Area	Dataset shows positions declared between 2017 and 2021, along with the associated catch weight and values, into C-Squares of 0.05 x 0.05 decimal degrees.

## 13.7 Baseline Environment

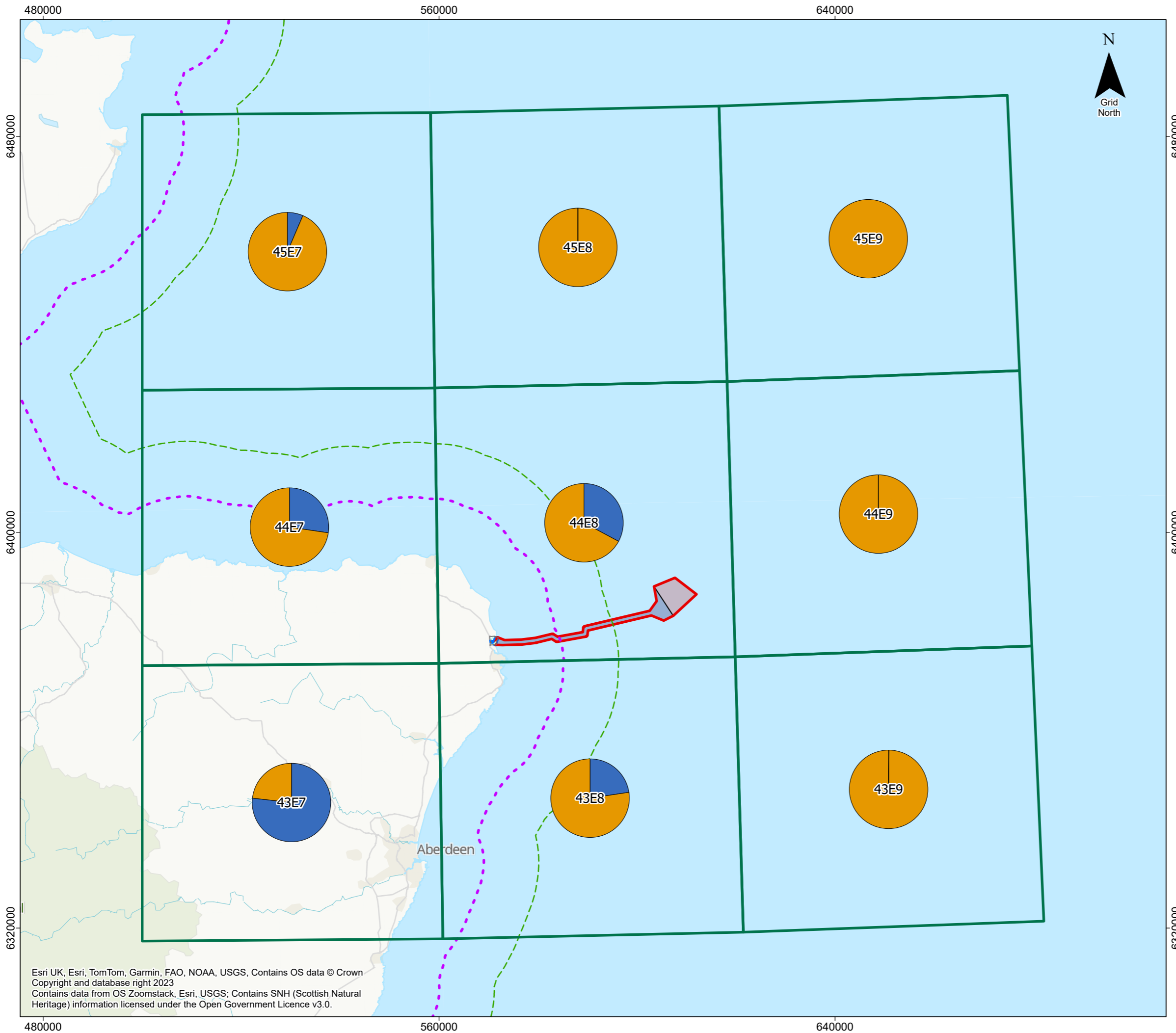
### 13.7.1 Existing Baseline

13.7.1.1 The existing baseline has been characterised through the use of long-term data sets that describe fishing trends in the ICES Rectangles surrounding the Salamander Project, the Study Area.

#### Regional Overview

13.7.1.2 The North Sea is one of the most productive fishing areas in the world with an estimated total annual landing of two million tonnes (Akbari *et al.*, 2022). Direct access to this significant resource means that fishing is important to Scotland's rural and coastal economies, as well as the wider economy. The Scottish fishing industry contributed 60% of total value and 62% of the tonnage of all landings by UK vessels in 2019 (Marine Directorate, 2023) demonstrating that Scotland is of key importance to UK fisheries.

13.7.1.3 Aberdeenshire, the local authority within which the proposed development falls, is home to Peterhead – the UK's largest fishing port. Scottish fisheries can broadly be beneficial within four sectors that operate with respect to target species: the pelagic fleet, the demersal or whitefish fleet, the mixed demersal, and the shellfish fleet. Whilst these fisheries often operate at some distance from the coast, they are deeply intertwined with the local economy, enhancing culture and providing jobs at ports and processing plants. More information regarding socio-economics in the local area can be found in **Volume ER.A.3, Chapter 19: Socio-economics, Tourism and Recreation.**



# Salamander

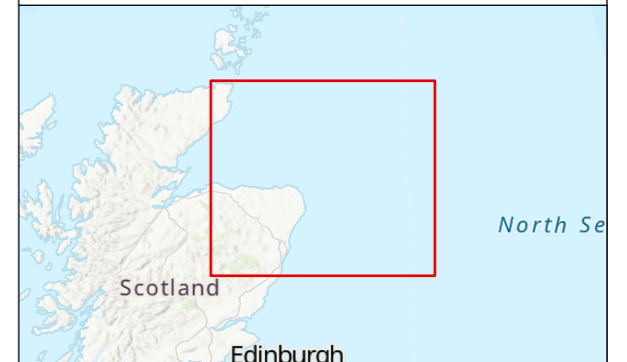
Figure 13-2  
Proportion of vessel lengths, within ICES Rectangles in the Study Area (2016-2022) (MMO, 2023a)

## Legend

- Offshore Development Area
- Offshore Array Area
- Offshore Export Cable Corridor
- Indicative Onshore Development Area
- 6nm limit
- 12nm limit
- Onshore Scoping Area
- Commercial Fisheries Study Area

## Vessel Lengths

- 10m and Under
- Over 10m



Coordinate System: WGS 1984 UTM Zone 30N

Scale @ A3 : 1:750,000

0 20 40 Kilometers

0 5 10 20 Nautical Miles

Rev	Description	Date
01	Final Issue	27/03/2024
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Doc. Title : Proportion of vessel lengths, within ICES Rectangles in the Study Area (2016-2022)

Doc. No : SWF01ER0335

Created by : NB

Checked by : IW

Approved by : AM



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### Overview of Landings Data in the Study Area

- 13.7.1.4 Landings from the ICES Rectangles within the Study Area were compiled from the MMO (MMO, 2023a) using the most recent seven years of timeseries data (2016-2020) in addition to the 2021 and 2022 sea fisheries data (MMO, 2023b and 2023c).
- 13.7.1.5 The total landed value of fish across the time period (2016-2022) for ICES Rectangle 44E8 was estimated at over £35 million, representing 14.32 % of the total value caught across the surrounding eight ICES Rectangles comprising the Study Area. Broadly, ICES Rectangles adjacent to coastlines represent fisheries of mixed vessel size classes (**Figure 13-2**), whereas the eastern-most ICES Rectangles are entirely fished by vessels greater than 10 m in length. This spatial distinction of vessel classes across the ICES Rectangles is apparent both in the value of the catch and weight of total landings. Smaller vessels contributed the greatest value in ICES Rectangle 43E7 where 77.30% of the catch value was by vessels <10 m, although overall this ICES Rectangle equates to a small offshore area (**Figure 13-2**). Similarly, in terms of weight, 43E7 vessels under 10 m took approximately 69% of the catch and in 44E7 and 44E8 vessels under 10 m took approximately 30 % of the total landed weight. This demonstrates that these nearshore vessels are highly productive in terms of landing weight. The aforementioned ICES rectangles also present an increase in catch value (**Figure 13-3**) across recent years of the study period, with 43E8 displaying the most significant increase, with a 14 % increase in catch value since 2019. Further signifying the importance and high productivity of nearshore fisheries within the Commercial Fisheries Study Area and supported by consultation feedback from individual fishing vessel operators.

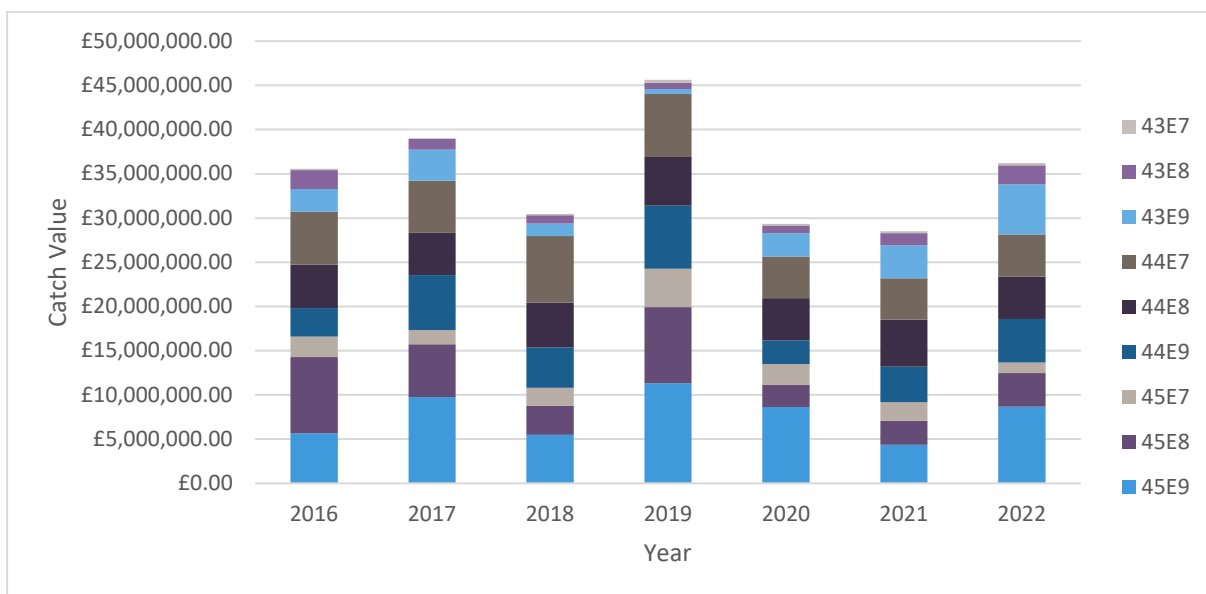


Figure 13-3 Value of landings through the timeseries for each International Council for the Exploration of the Seas Rectangle within the Study Area (2016-2022) (MMO, 2023a)

### Gear Types Utilised within the Study Area

- 13.7.1.6 A range of gear types are used to target a diversity of species within the Study Area. The gear type utilised by fishers is observed to be spatially variable relative to the marine environment and the size of the vessel, with vessels <12 m operating predominantly within the 12 nm limit.



- 13.7.1.7 Passive methods include pots and traps and gears using hooks, together responsible for over 37% of value attained from fisheries within 44E8. Here, vessels less than 10 m in length are typically potters for crab and lobster or use gear using hooks to fish for mackerel. In coastally adjacent rectangles 44E7 and 43E8, pots and traps account for between 20% and 24% of the catch value. Within inshore and spatially restricted ICES Rectangle 43E7, potting contributes to over 88% of the value of fisheries located there. Passive methods are seen to be less prevalent within ICES Rectangles further offshore.
- 13.7.1.8 Demersal species are primarily targeted with otter trawls or scallop dredges, although beam trawls and demersal seine are also observed. Across the study region, the largest contributor of value to fisheries from the previous seven years is otter trawling, accounting for over 70% of the catch value within the Study Area. However, within 44E8, the location of the proposed Salamander Project, otter trawling accounts for just 36% of the catch. For vessels over 10 m, otter trawls are the main gear type used, targeting nephrops (*Nephrops norvegicus*), monks and anglers (*Lophius*), haddock (*Melanogrammus aeglefinus*), mackerel (*Scomber scombrus*), squid (*Cephalopoda*) and whiting (*Merlangius merlangus*). A large proportion of the value of landed catch from 43E8 (65%) was achieved through dredging. This capture method is also seen to contribute financially within surrounding ICES Rectangle’s 44E8 and 45E7 although to a lesser extent, 18% and 38% respectively.
- 13.7.1.9 The gear types utilised by pelagic fisheries, including pelagic seine, account for a larger proportion of the catch in offshore ICES Rectangles. Shellfish contributed the most to the catch value, 79% in 43E8, and 66% in 44E8. Further to the east and further offshore in 43E9 vessels targeted both pelagic (57%) and demersal species (36%) and in 44E9 vessels targeted shellfish (57%) and pelagic species (40%) throughout 2016-2022. Gear types utilised in each ICES Rectangle showing spatial segregation of fishing activities are presented in **Figure 13-4**.

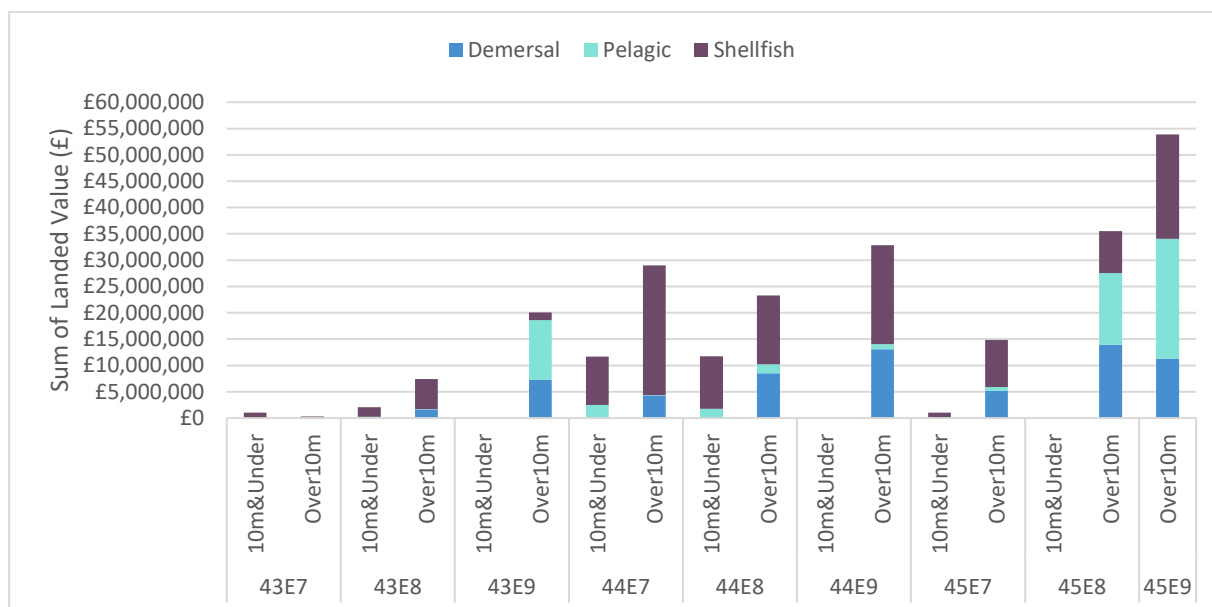


Figure 13-4 Size classes of vessels in each International Convention for Exploration of the Seas Rectangle and the relative proportions of broad target species grouping (2016-2022) (MMO, 2023a)

## Potters

- 13.7.1.10 Fishers using pots and traps to target crabs and lobsters are responsible for a large proportion of value catches within the Study Area, 33% in 44E8. Here, an area of higher potting intensity is seen to overlap with the Offshore ECC, although other, less productive areas are seen to the north within 44E8 and to the south in 43E8. No activity is seen within the OAA. Potting is also an important resource for ICES Rectangles 43E7, 43E8, 44E7, 44E8 and 45E8 (**Figure 13-5**). Although crabs make up 95% of landed weights annually, lobsters account for 25% of catch value demonstrating the stability of lobster's high value and importance to potters within the Study Area. These fishers generally utilise vessels less than 10 m and are active throughout the year, with marginal increases in catch in the summer and autumn months as confirmed by consultation feedback, which has been essential in establishing a robust baseline of fishing grounds for this receptor. These vessels are of predominately Scottish nationality, although 1% of crabs within the Study Area are landed by English vessels. Catches from 44E8 are landed at many ports including Aberdeen, Arbroath, Boddam, Cairnbulg, Fraserburgh, Gardenstown, Macduff, Peterhead, Port Erroll, Portknockie, Whitehills and Wick. Shellfish landings within ICES Rectangle 44E8, where the proposed OAA and Offshore ECC are situated is particularly important for the under 10 metre vessels in the Study Area. These smaller vessels have limited range and ability to adapt to targeting other species due to the investment in creels required by the SME and the low resale value of used gear. Shelmerdine & Mouat (2021) identify two key potting grounds in 44E8, with the cable route intersecting one of them. The majority of potting activity (vessels <15 m) is near Peterhead and expected to be within the 6 nm limit.
- 13.7.1.11 VMS data comprises data for vessels over 15 m, and the MMO data categorises vessels as over 10 m. Accordingly, there is a data gap for vessels between 10-14.9 m in length. To address this, potters using vessels of intermediate length registered at ports with landings from within the Study Area were identified using fishing vessel lists and licenses held. Vessels within this category include: Lily V, Patsy B, Wendy Patricia, Our Lynn, Eventus, Endurance, Anitra Bonnie Lass II, Border Queen and Boy Richie II.

**Table 13.5 The relative proportion of vessel lengths of potters in each International Convention for Exploration of the Seas Rectangle across the Study Period (2016-2022) (MMO, 2023a)**

Vessel Length	43E7	43E8	43E9	44E7	44E8	44E9	45E7	45E8	45E9	Grand Total
10 m and Under	87.52%	95.48%	49.98%	91.53%	77.01%	100.00%	64.65%	18.42%	0.00%	84.69%
Over 10 m	12.48%	4.52%	50.02%	8.47%	22.99%	0.00%	35.35%	81.58%	100.00%	15.31%

## Handliners / Gear Using Hooks

- 13.7.1.12 The Handliners / gear using hooks receptor group typically uses line to target mackerel, with minimal catches of other species. Activity is primarily from boats less than 10 m in length, in coastally adjacent ICES Rectangles. Reliant on seasonal migrations of mackerel, the majority of the landed weight throughout the

year is caught in the summer months. The highest catches are seen in July and August, together accounting for approximately 79% of the year's catch. This receptor is entirely of Scottish origin. Mackerel caught within 44E8 are typically landed within Portsoy, Roseheart, Whitehills and Sandhaven and Pitouille. As discussed in **Section 13.6.2**, VMS data only captures vessels greater than 15 m in length, therefore consultation with local handliners has been essential in establishing a robust baseline of fishing grounds for this fleet. Consultation with local handliners and other commercial fisheries stakeholders has been undertaken. Information received via consultation meetings and questionnaire responses have been used to supplement the official datasets used to characterise the existing baseline environment and inform the impact assessment.

#### Scallop Dredgers

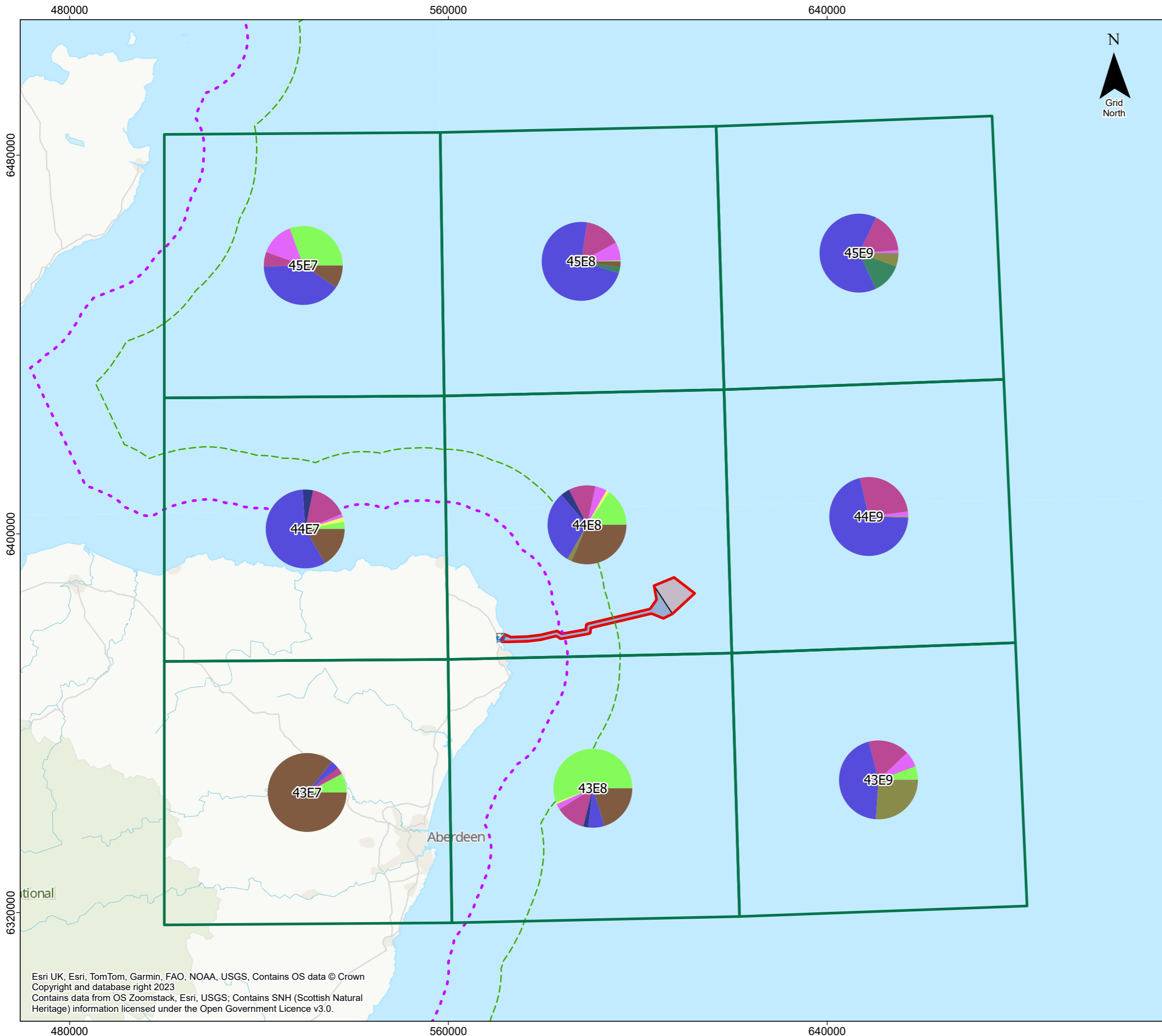
- 13.7.1.13 Dredgers consist of rigid structures towed along the seabed to capture scallops; typically deployed from vessels greater than 10 m in length. Dredgers are very important within 43E8, 43E9, 44E8 and 45E7. In the Study Area, the majority of scallop dredgers are Scottish, although some English vessels are seen.
- 13.7.1.14 Within the Commercial Fisheries Study Area, landings by scallop dredgers accounted for 8.36% of the total value of catch. Particular regions of intensive scallop dredging can be seen within 44E8, 43E8 and 43E9; within the Offshore Development Area there is overlap between these fisheries and the Offshore ECC, although the regions of highest activity are avoided, and the wider scallop fishing grounds are locally extensive.
- 13.7.1.15 Scallop dredgers land their catch from 44E8 in ports including Buckie, Macduff and Peterhead.

#### Otter Trawlers

- 13.7.1.16 Otter trawling utilises a cone-shaped net that is towed over and remains in contact with the seabed, held open by otter boards on each side of the net. The most commercially lucrative fishing method within the Study Area, otter trawling accounts for over 70% of the catch value within the Study Area. Similar to other receptors, otter trawls are most active in the latter half of the year, from June onwards with peaks in catches seen in August, September and October.
- 13.7.1.17 This receptor targets a wide range of species including haddock, herring, mackerel and nephrops as well as monks and anglers, squid and whiting in smaller quantities. The nationality of vessels utilising otter trawls is predominately Scottish, but also includes English, Northern Irish and other non-UK vessels.
- 13.7.1.18 Albeit to a lesser extent, demersal trawling is important throughout the Study Area, particularly important areas include 43E9, 44E7, 44E8, 44E9, 45E8 and 45E9. Catches from 44E8 are often landed in Burghead, Gairloch, Kinlochbervie, Mallaig and Peterhead.

#### Pelagic Trawlers

- 13.7.1.19 Pelagic trawls are generally restricted to ICES Rectangles further offshore in the Study Area, including 43E9 and also 44E8. The majority of non-UK vessels are pelagic trawlers, hailed from across the North Sea, although effort data reveals these fisheries are highly variable year on year.
- 13.7.1.20 Within 44E8, catches of herring are generally landed in Maloy (Norway), although pelagic trawls do not make up a large portion of catch value within this ICES Rectangle (see **Figure 13-5**).



# Salamander

Figure 13-5  
Proportion of gear used by catch value across the Study Area (2016-2022) (MMO, 2023a)

- Legend**
- Offshore Development Area
  - Offshore Array Area
  - Offshore Export Cable Corridor
  - Indicative Onshore Development Area
  - 6nm limit
  - 12nm limit
  - Onshore Scoping Area
  - Commercial Fisheries Study Area

- Gear Types**
- Beam trawl
  - Dredge
  - Handlines
  - Demersal seine
  - Demersal trawls
  - Gears using hooks
  - Otter trawl
  - Pelagic seine
  - Pelagic trawls
  - Pots and traps



Coordinate System: WGS 1984 UTM Zone 30N  
Scale @ A3 : 1 : 750,000

0 20 40 Kilometers  
0 5 10 20 Nautical Miles

Rev	Description	Date
01	Final Issue	27/03/2024
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Created by : NB  
Checked by : IW  
Approved by : SM

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### Temporal Trends in the Study Area

- 13.7.1.21 Year on year, aspects of the fisheries are dependent on various socio-economics, environmental, and legislative variables. Within the study region, catches from several ICES Rectangles are particularly inconsistent, including 45E9, 45E8 and 44E9. However, 44E8 returns a consistent value annually, with an average of £1,222,488 across the seven-year period.
- 13.7.1.22 Notably, in 44E8 the value of demersal species fisheries has increased from 2016 at just under £500,000 to £1,627,616 across the five-year period (2016-2020) before a decline in 2021, potentially resulting from the impact of the Covid-19 pandemic and recovering slightly in 2022 to £1,250,087. In contrast, 44E9 and 45E9 show approximately similar oscillating trends. ICES Rectangles where the value of the demersal catch remained relatively stable include 44E7 and 43E8. Across the broader Study Area, and across all species groups, value approximately tracks with landed weight indicating that variation is due to differential catch as opposed to an economic driver.
- 13.7.1.23 Fishing activity is inherently seasonal in nature and varies with the fishery in question; for example, mobile fisheries targeting pelagic species are seen to track annual migrations of herring and mackerel. Broadly, the catch varies throughout the year and follows a cyclical pattern annually: low value catches early in the year, higher value catches in the summer, followed by catches dominated by herring and afterwards, mackerel before catches decline and the cycle repeats.
- 13.7.1.24 Throughout the winter months, low catches are observed, reaching a minimum in March, after which the catch value increases steeply into June, remaining high throughout the summer months before the onset of a gradual decline through autumn. An outlier to this observed trend is October, owed to a large flux of mackerel that dominates the value of the monthly catch. On a smaller scale, the influence of the seasonal herring migration is visible in the data, contributing to the value of the catch in May, July and September. Further species trends include nephrops, although caught throughout the year, values in the summer months are much higher than in winter months. Squid follow a similar trend. Scallop are caught through the spring and summer, but declines are seen through autumn and winter. A decline in the catch of haddock is observed in March, April and May although remains consistent throughout the year otherwise. Species that catch values remain relatively consistent throughout the year include monks or anglers and crabs. Lobsters on the other hand show subtle seasonal variation as catches are higher in summer than in winter.
- 13.7.1.25 Year on year, the value of catches remains relatively consistent, especially for species such as whiting, monks or anglers, haddock, crabs and lobsters. Taking in the total value of the catch across the seven years, the value of catch peaked in 2019, with the total value catch of the year largely determined by mackerel catch. That said, in 2022, herring and monks or anglers recorded the highest landed value across the study period at £3,942,208 and £2,857,214, respectively; progressively increasing from 2019 despite a drop in monk or angler catch value in 2020, as a potential result of the Covid-19 pandemic. Noting the pandemic effect, less significant increases in catch value were also identified with crabs and nephrops. 2022 yielded one of the highest annual catch value across the study period at £34,047,427. Within ICES Rectangle 48E8, it is observed that the value of catch each year directly correlates with the landed weight for shellfish, pelagic and demersal species (**Figure 13-6**).

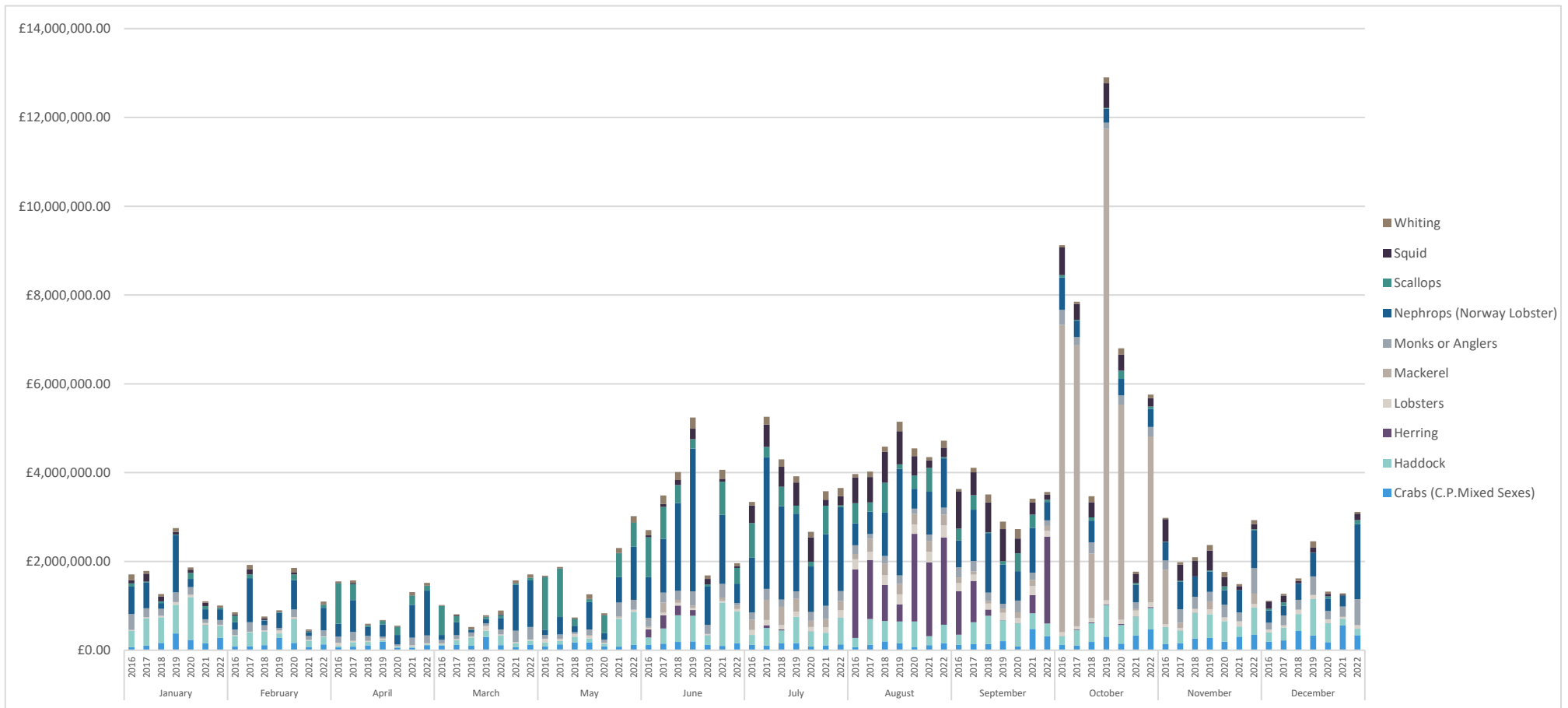
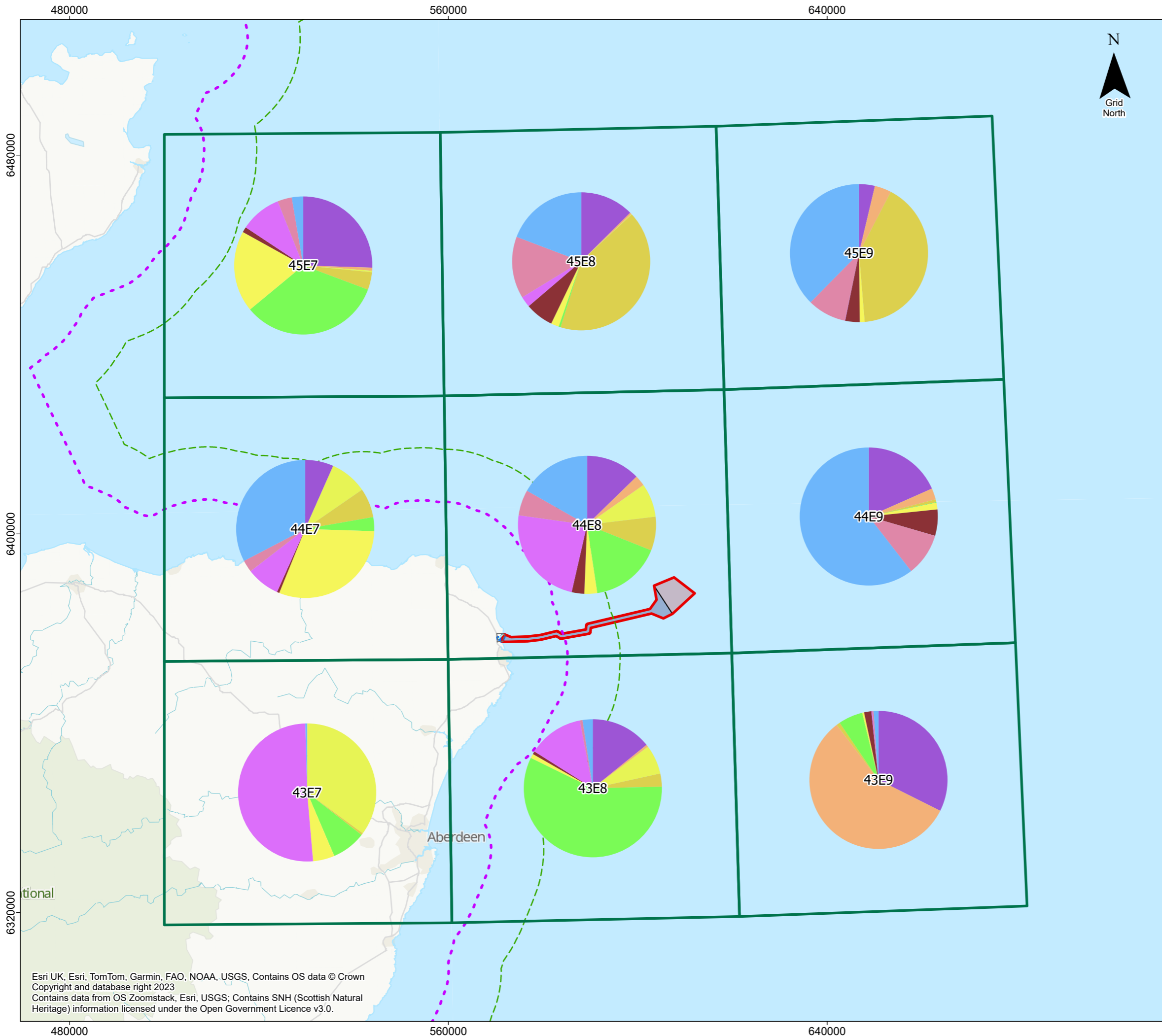


Figure 13-6 Interannual variation in monthly catches, including the ten most commercially important species within the Study Area (2016-2022) (MMO, 2023a)

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## Commercially Important Species

- 13.7.1.26 In 44E8, the species targeted differ dependent on the vessel and gear utilised. Vessels under 10 m typically use pots and traps to catch crabs (64% of the value of the catch), and lobsters (35%). Mackerel comprising of 17% of the catch are caught by gears using hooks. Larger vessels target different species, utilising otter trawls, responsible for 59% of the catch value. Otter trawls are used to capture nephrops, haddock, monks and anglers as well as some mackerel; squid and whiting to a lesser extent. Dredges exclusively target scallops (99.98% of the catch value associated with dredges). Other fishing methods used include demersal trawls and demersal seines targeting haddock, nephrops and monks and anglers, with other species likely caught as bycatch.
- 13.7.1.27 Across the Study Area, different ICES Rectangles show vastly different proportions of species (by catch value) (see **Figure 13-7**). Numerous different species can be observed within 44E8, whereas the majority of catch value from 44E9 are nephrops, with haddock and monks and anglers to a lesser extent; as would be expected from a fishery dominated by otter trawls. Areas 45E8 and 45E9 shows a high proportion by catch value of mackerel, suggesting that these ICES Rectangles are areas of particular importance to this fishery within the Study Area. Dredging for scallops equates to nearly three quarters of the value of catches in 43E8. Scallops also make sizeable contributions in terms of proportion of catch value to 45E7 and 44E8. In nearshore areas such as ICES Rectangle 43E7, lobsters and crabs are particularly important commercially, with much of the fishing is conducted through deployment of pots and traps.



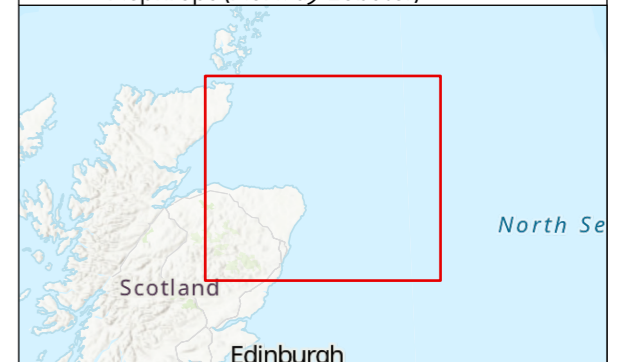
# Salamander

## Figure 13-7

Proportion of commercially important species by catch value within the Study Area (2016-2022) (MMO, 2023a)

- Legend**
- Offshore Development Area
  - Offshore Array Area
  - Offshore Export Cable Corridor
  - Indicative Onshore Development Area
  - 6nm limit
  - 12nm limit
  - Onshore Scoping Area
  - Commercial Fisheries Study Area

- Species**
- Haddock
  - Herring
  - Lobsters
  - Mackerel
  - Scallops
  - Squid
  - Whiting
  - Crabs (C/P Mixed Sexes)
  - Monks or Anglers
  - Nephrops (Norway Lobster)



Coordinate System: WGS 1984 UTM Zone 30N  
Scale @ A3 : 1 : 750,000

0 20 40 Kilometers

0 5 10 20 Nautical Miles

Rev	Description	Date
01	Final Issue	27/03/2024
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Doc. Title : Proportion of species by catch value within the Study Area (2016-2022)

Doc. No : SWF01ER0337

Created by : NB

Checked by : IW

Approved by : AM



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### Landings into Ports

- 13.7.1.28 Details of European fisheries within the Study Area have been taken from the MMO dataset “*UK and foreign vessels landings by UK port and UK vessel landings abroad (2016-2022)*” (MMO, 2023a). Fish and shellfish captured within the Study Area are seen to be landed in approximately 50 ports across northeast Scotland. Larger ports include Peterhead (38.64%) or Fraserburgh (43.15%) where the majority of fish are landed; whilst many other smaller ports contribute, including Buckie, Macduff, Wick and Aberdeen. Within 44E8, Peterhead and Fraserburgh accounting for nearly 90% of landings (MMO, 2023a). The only other port that takes a significant value of catch is Maloy (Norway) (7.67%).
- 13.7.1.29 Looking across a larger date range, from 2009 to 2020 there has been a gradual increase in catches landed in Peterhead, from 111,000 tonnes in 2011 to 146,000 tonnes in 2020; a sizeable drop in landed weight in 2011 due to political issues (MMO, 2017). However, this decline also corresponds with relatively increased landings in Fraserburgh, Buckie and Blyth.

### Vessel Nationality

- 13.7.1.30 The majority of UK vessels within the Study Area are of Scottish origin (79%), whilst English (15%) and Northern Irish vessels (6%) make up the remainder. In terms of the size of vessel, those coming from both England and Northern Ireland are overwhelmingly over 10 m, 100% respectively, whilst 91% of Scottish vessels are in the larger size class.
- 13.7.1.31 Northern Irish vessels almost exclusively utilise otter trawls (62%), whilst the Scottish fishery utilises a greater variety of gear. For example, gears with hooks, handline fisheries and pelagic seines are only employed by the Scottish fleet. Demersal seines are used by both Scottish and Irish vessels. No Irish vessels utilised dredges in the Study Area 2016-2021.
- 13.7.1.32 The majority of landings into the major ports servicing the Study Area are mostly made by UK vessels. Peterhead is the most cosmopolitan port, with catches landed from vessels hailing from Belgium, Denmark, France, Ireland, and the Netherlands. In Peterhead, non-UK landings equate to 8.18% of the total landed weight from 2016-2020, whereas the total across Aberdeen, Buckie, Fraserburgh and Peterhead is 7.26%.

### Non-United Kingdom Vessels

- 13.7.1.33 Across the study area, vessels from Belgium and the Faroe Islands exclusively targeted shellfish. Irish vessels fish exclusively for pelagic species. Vessels from Denmark and Norway generally targeted pelagic species and to a lesser extent demersal species, and vessels from France exclusively targeted demersal species (UK and foreign landings by port 2016-2021).
- 13.7.1.34 Fisheries effort (STECF, 2017) shows that within the Study Area non-UK vessels including those from Germany, Denmark, Netherlands, Sweden and Ireland primarily undertake pelagic trawling within the Study Area, generally further offshore than 44E8. In the four years from 2013-2016, German pelagic trawl vessels spent 164 hours of fishing effort within the Study Area, of which just 15 was spent within 44E8 all with a pelagic trawl. Across the same time period, Swedish vessels spent 10 hours within the Study Area; Irish vessels 21 hours, with 2 hours within 44E8.
- 13.7.1.35 Danish vessels had the largest fishing effort, with 3,993 hours fishing within the Study Area, using a variety of gears, including entangling nets (108 hours, 43E9 and 44E8), pelagic seines operated for 24 hours within 44E9. The remainder of the hours spent fishing utilised demersal trawls. Despite the time spent within the

Study Area, just 12 hours were spent inside 44E8. Second in terms of effort, the Dutch fished for 621 hours in the Study Area, but only 3 hours within 44E8.

13.7.1.36 **Figure 13-8** illustrates the landed weight (t) of non-UK fishing vessels across the Study Area by ICES Rectangle (2011 to 2016). As expected, due to the distance from shore, no fishing activity by non-UK vessels has been recorded within ICES Rectangle 43E7. The highest landed weight across the Study Area can be observed within ICES Rectangle 43E9, predominantly by vessels from Denmark deploying pelagic trawls (2011 to 2016). A notable landed weight can also be observed within ICES Rectangle 43E9 by vessels from the Netherlands, with these vessels also deploying pelagic trawls.

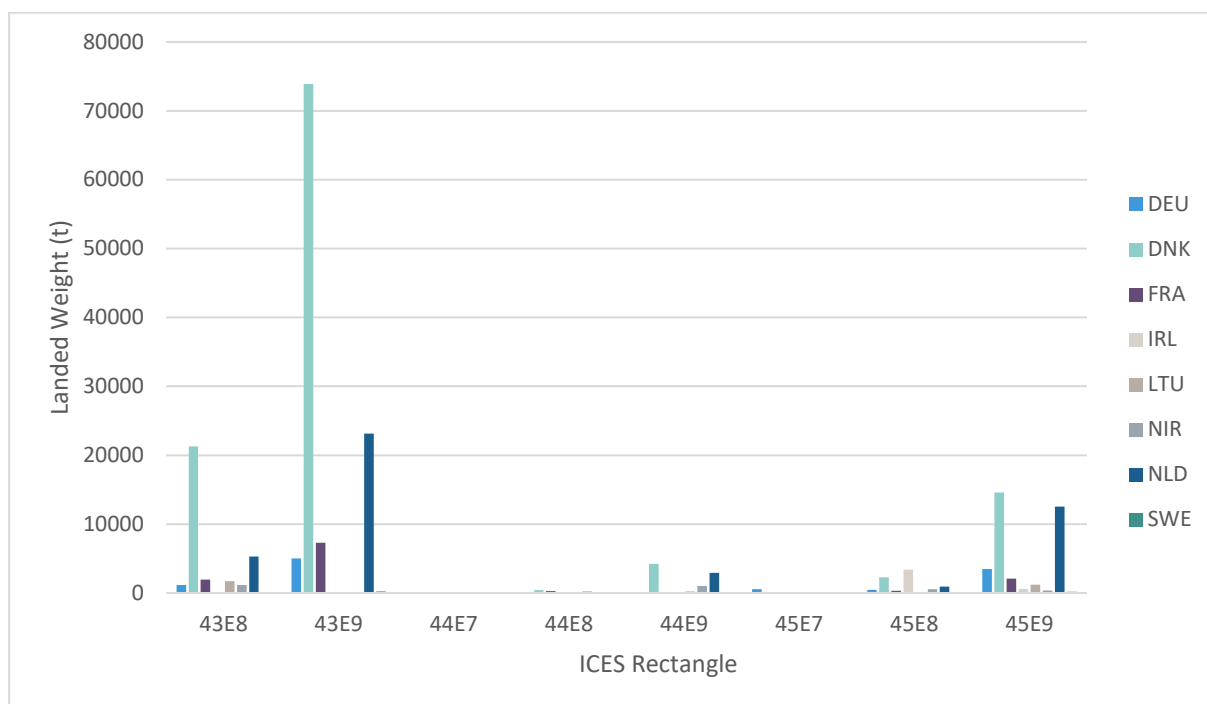


Figure 13-8 Landed weight by non-United Kingdom vessels caught across the Study Area (2010-2016) (EU STECF, 2017).

### Spatial Distribution of Fishing Activity/Effort in the Study Area

13.7.1.37 Across the Study Area, a multitude of factors determine where fisheries target species in a particular year, supported by the 2022 fishing vessel density data in **Figure 13-15**. By observing data across a six-year period, the nuances of interannual variation are illuminated so that normal fluctuations in fishing can be considered across the lifecycle of the Salamander Project.

#### Pelagic Trawls

13.7.1.38 Distinct hotspots of intense activity are seen, although location varies year on year (**Figure 13-9**). In particular, 2017 sees the greatest fishing effort within the Study Area, focused on 44E7, 45E9 and 43E9. Throughout the years covered by the VMS data, no targeted effort was observed within 44E8; although efforts on the boundary between 43E8 and 43E9 are relatively close to the Offshore Development Area, located in the southern portion of 44E8. Due to the highly variable nature of migrating fish, there is potential that 44E8 may represent a suitable area for pelagic trawling in future years or years not captured here, if depth is not a limiting factor.

### Potting

- 13.7.1.39 Similarly, potting grounds demonstrate considerable interannual variability; although effort is seen to be clustered within one location in most years. In 2016, this cluster fell within 44E8 and 43E8, with potting activity concentrated in the centre of the ICES Rectangle with effort of up to 200-300 hours overlapping with the Offshore ECC (**Figure 13-10**). In later years the cluster of effort is dispersed within the northern reaches of the Study Area, 45E7 and 45E8. Note that vessels smaller than 15 m are not captured by VMS data, and therefore those smaller vessels known to engage in potting activities are underrepresented in the data.

### Scallop Dredging

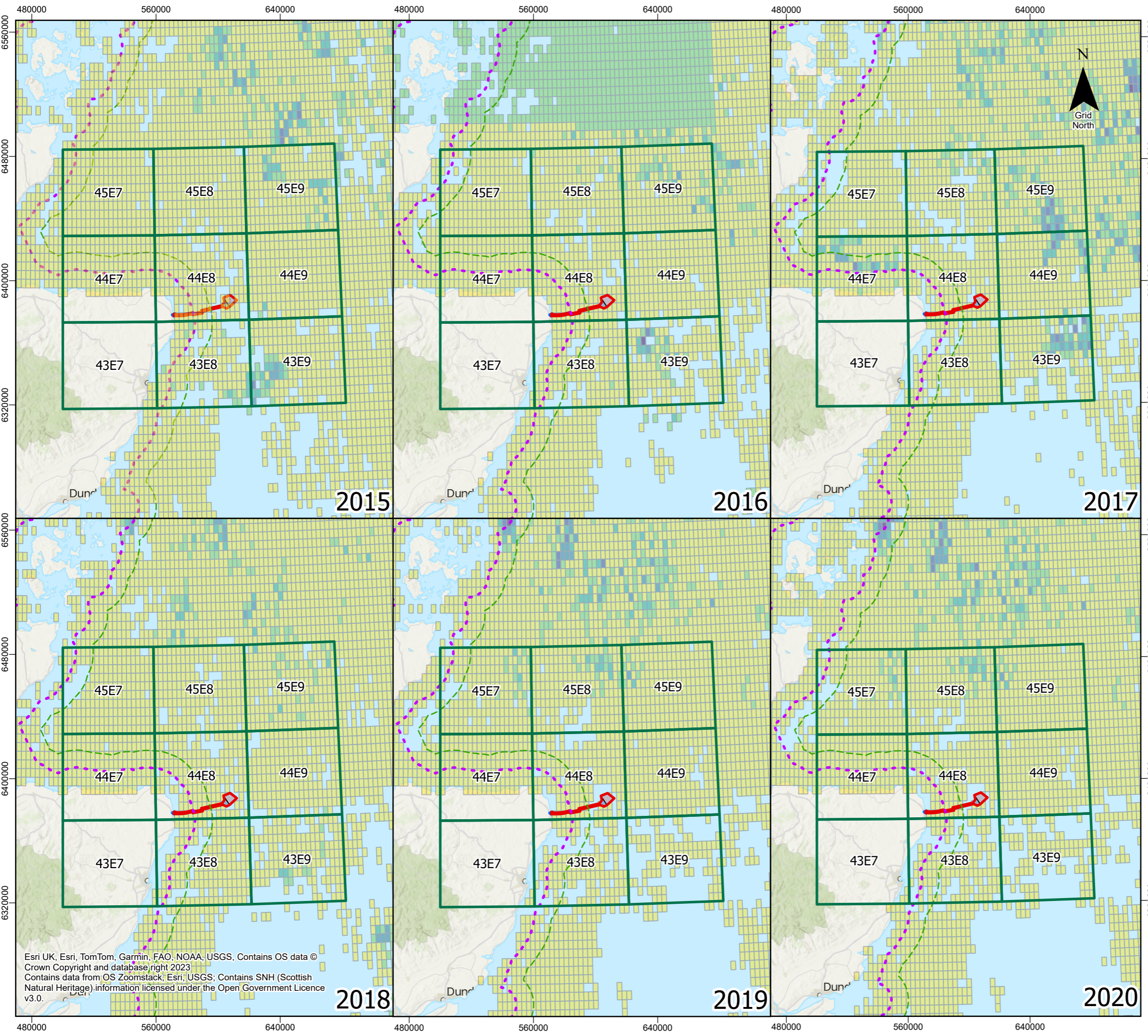
- 13.7.1.40 Within the Study Area, VMS data illustrates that patterns of dredging activities follow an almost inverse distribution to those frequented by otter trawlers. ICES Rectangle 44E8 appears to be particularly important for dredging. Dredgers typically target shallower, nearshore areas across the proposed Offshore ECC. In comparison to the rest of the Study Area, 45E7, 44E8, 43E8 and 43E9 are observed to be the most important regions for this activity (**Figure 13-11**). However, interannual trends demonstrate that across time, dredging effort appears to show a decline in recent years.

### Otter Trawling

- 13.7.1.41 This method of fishing follows a repeated, consistent distribution of effort throughout 2015-2020. Spatially, VMS data reveals that whilst otter trawling is widespread within the Study Area, supported by consultation feedback, a lull in effort is observed within ICES Rectangle 44E8 (**Figure 13-12**). Where otter trawling is undertaken within 44E8, effort is comparatively low with respect to nearby areas. Whilst data is not available for the OAA, otter trawling effort is seen to be consistently low across the proposed cable corridor.

### Handlining

- 13.7.1.42 The VMS data indicates that there is no handlining effort across the Study Area. However, MMO data (MMO, 2021) reveals that vessels engaging in handlining activities are less than 15 m, and therefore would not be captured within VMS data. As such, the absence of handlining effort in **Figure 13-13** should be considered to be an artefact of the data as opposed to a real absence of activity. It should be noted that this data limitation was highlighted during consultation, with suggestion of FIR interaction with fishermen to gather the relevant information on this receptor. Consultation also revealed that at least eight individual vessels operate from Aberdeen to Troop Head and up to 20 miles offshore throughout the year, fishing for mackerel seasonally. Whilst spatial trends of these smaller vessels cannot be observed by VMS, an understanding of these activities can be achieved through close interrogation of MMO data that includes vessels 10 m and below.

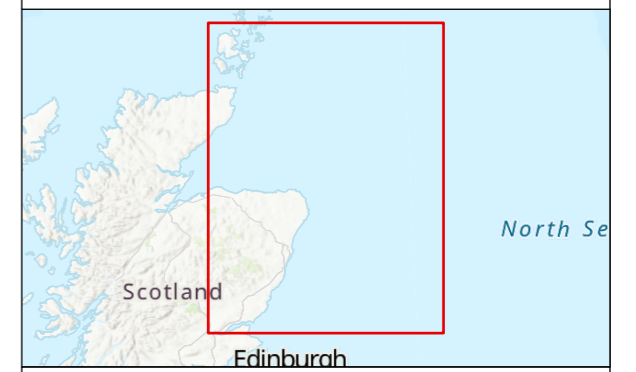


# Salamander

Figure 13-9

Activity of pelagic trawls in the Study Area (2015-2020) (MMO, 2021)

- Legend**
- Commercial Fisheries Study Area
  - Offshore Development Area
  - Offshore Array Area
  - Indicative Onshore Development Area
  - Offshore Export Cable Corridor
  - 6nm limit
  - 12nm limit
- UK Fishing activity (Pelagic gears) - Hours**
- < 1
  - 1 - 2
  - 2 - 4
  - 4 - 8
  - 8 - 16

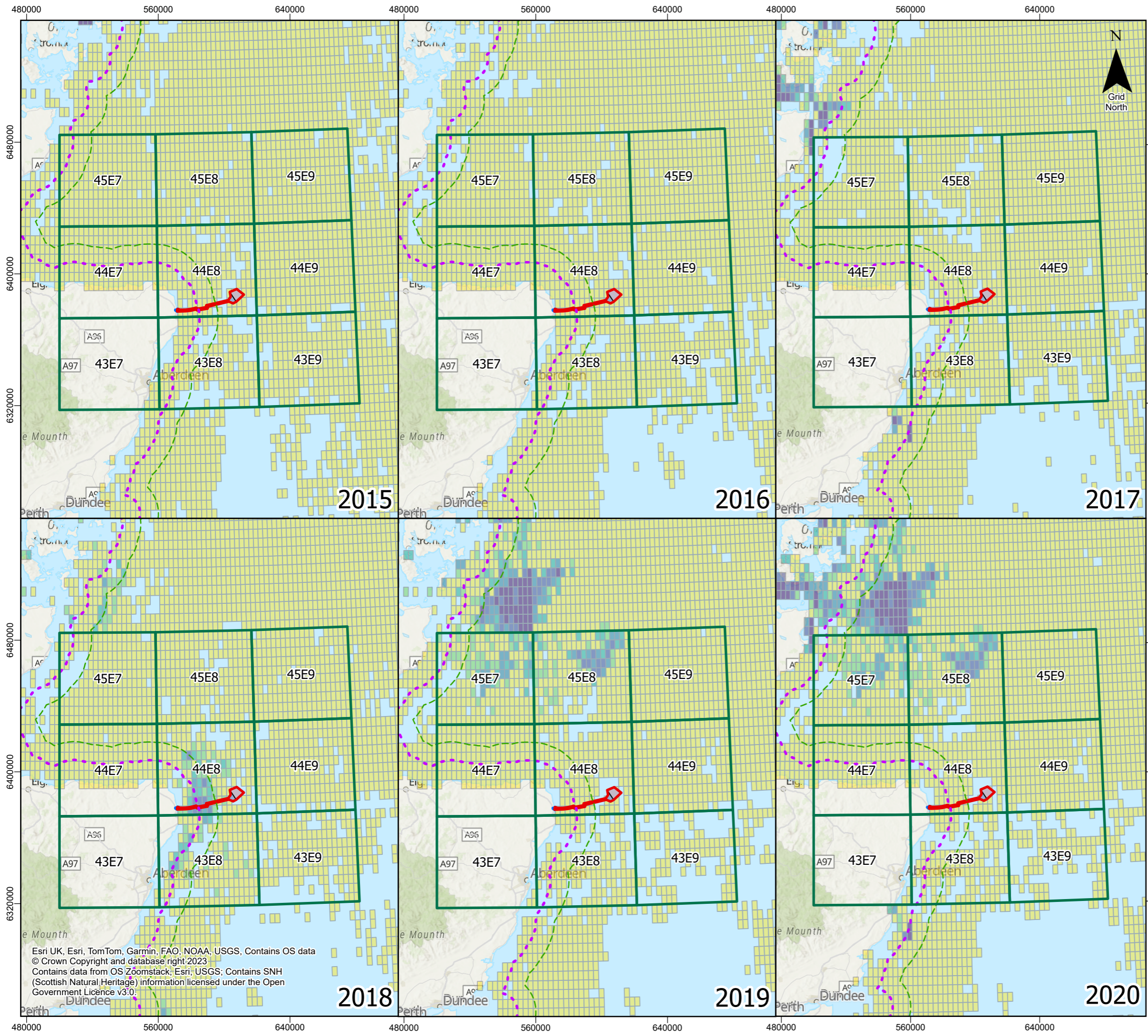


Coordinate System: WGS 1984 UTM Zone 30N  
 Scale @ A3 : 1 : 750,000

0 20 40 Kilometers  
 0 5 10 20 Nautical Miles

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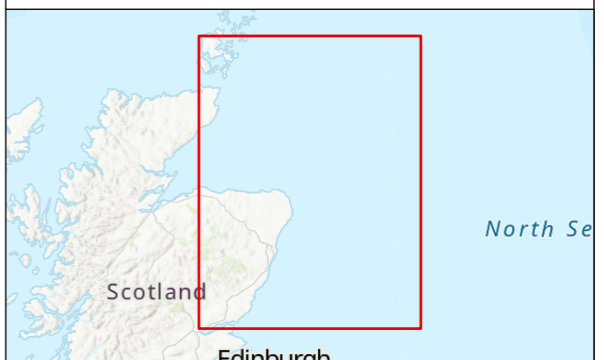
# Salamander

Figure 13-10

Activity of potters in the Study Area (2015-2020) (MMO, 2021)

**Legend**

- Offshore Development Area
  - Offshore Array Area
  - Indicative Onshore Development Area
  - Offshore Export Cable Corridor
  - 6nm limit
  - 12nm limit
- UK Fishing activity (Passive gears) - Hours
- < 1
  - 1 - 2
  - 2 - 4
  - 4 - 8
  - 8 - 16
  - > 16






Coordinate System: WGS 1984 UTM Zone 30N  
 Scale @ A3 : 1: 750,000

0 20 40 Kilometers  
 0 5 10 20 Nautical Miles

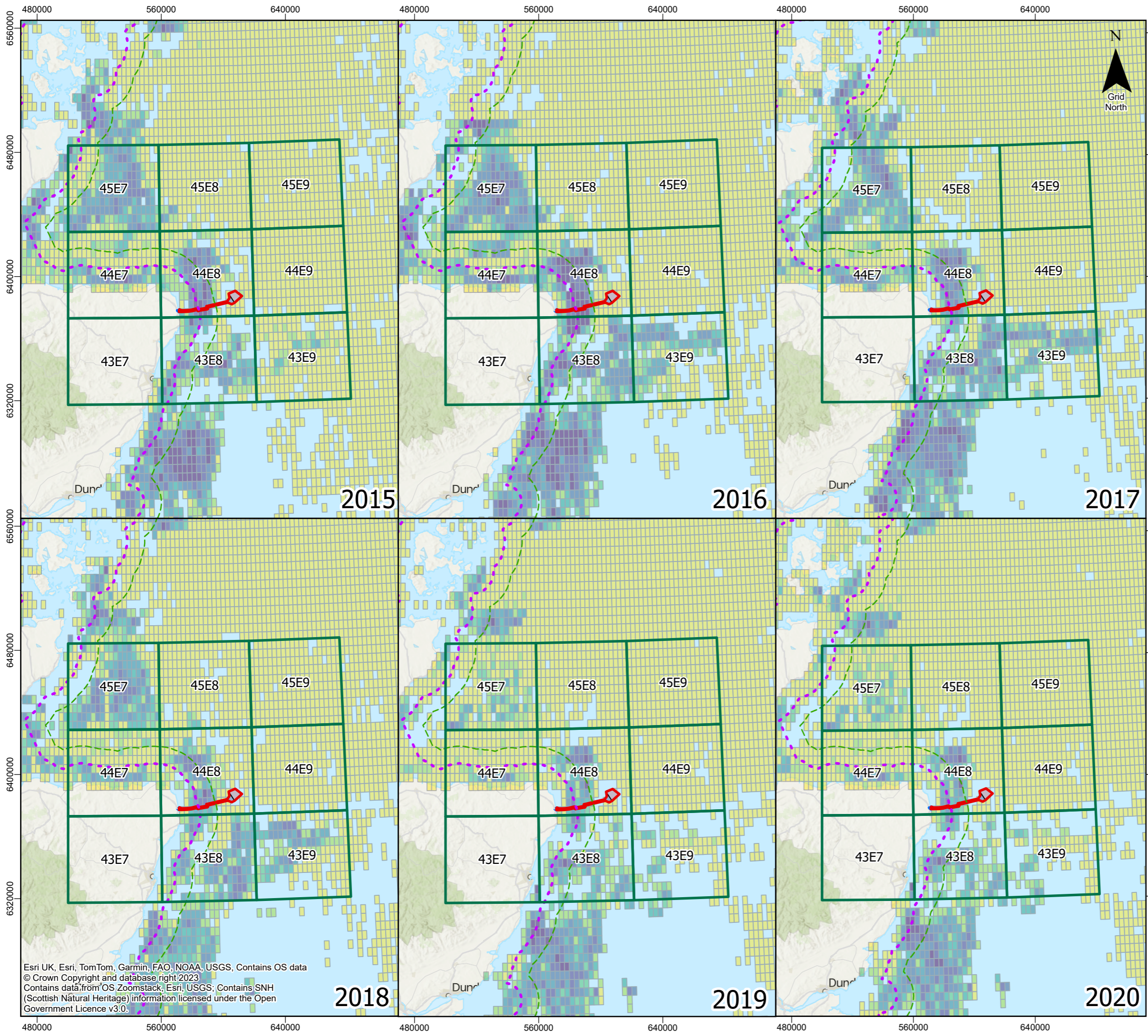
Rev	Description	Date
01	Final Issue	28/03/2024
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Doc. Title : Activity of potters in the Study Area (2015-2020)  
 Doc. No : SWF01ER0339  
 Created by : NB  
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 Approved by : AM



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# Salamander

Figure 13-11

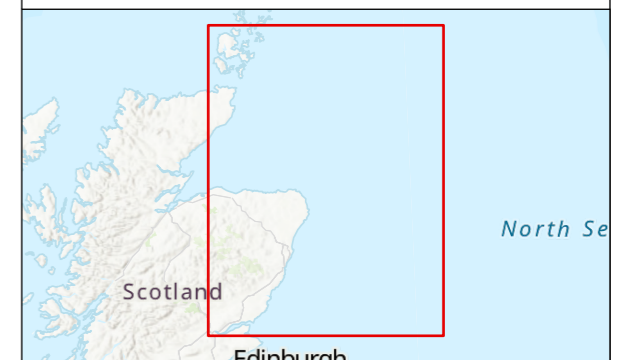
Dredging activities undertaken within the Study Area (2015-2020) (MMO, 2021)

**Legend**

- Commercial Fisheries Study Area
- Offshore Development Area
- Offshore Array Area
- Indicative Onshore Development Area
- Offshore Export Cable Corridor
- 6nm limit
- 12nm limit

**UK Fishing activity (Dredges) - Hours**

- < 1
- 1 - 4
- 4 - 8
- 8 - 16
- 16 - 32
- 32 - 64
- 64 - 128
- > 128



Coordinate System: WGS 1984 UTM Zone 30N  
 Scale @ A3 : 1: 750,000

0 20 40 Kilometers

0 5 10 20 Nautical Miles

Rev	Description	Date
01	Final Issue	28/03/2024
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Doc. Title : Dredging activities undertaken within the Study Area (2015-2020)  
 Doc. No : SWF01ER0340  
 Created by : NB  
 Checked by : IW  
 Approved by : AM

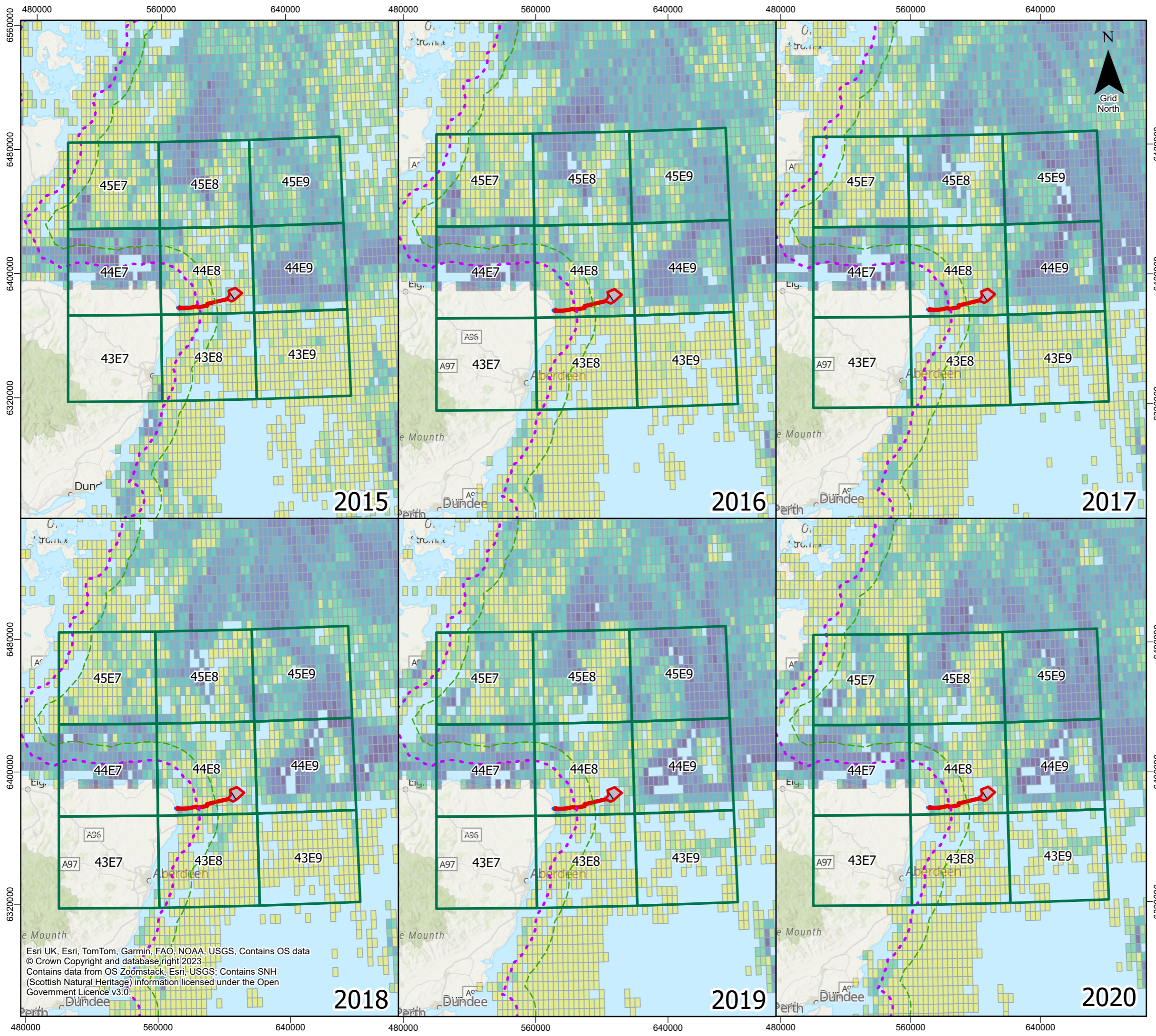
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# Salamander

## Figure 13-12

Distribution of otter trawling activities within the Study Area (2015-2020) (MMO, 2021)

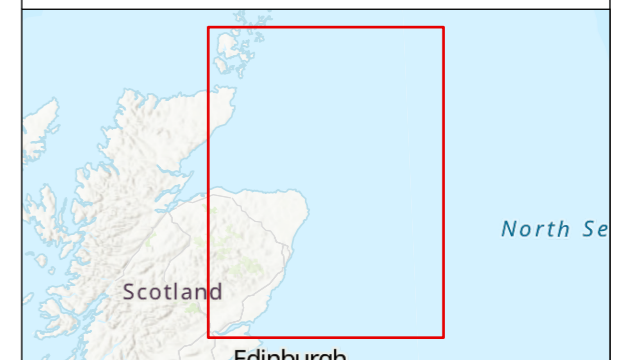


### Legend

- Offshore Development Area
- Offshore Array Area
- Indicative Onshore Development Area
- Offshore Export Cable Corridor
- Commercial Fisheries Study Area
- 6nm limit
- 12nm limit

### UK Fishing activity (Bottom Otter Trawls) - Hours

- < 60
- 60 - 120
- 120 - 480
- 480 - 960
- 960 - 2000
- 2000 - 3800
- 3800 - 7600
- > 7600



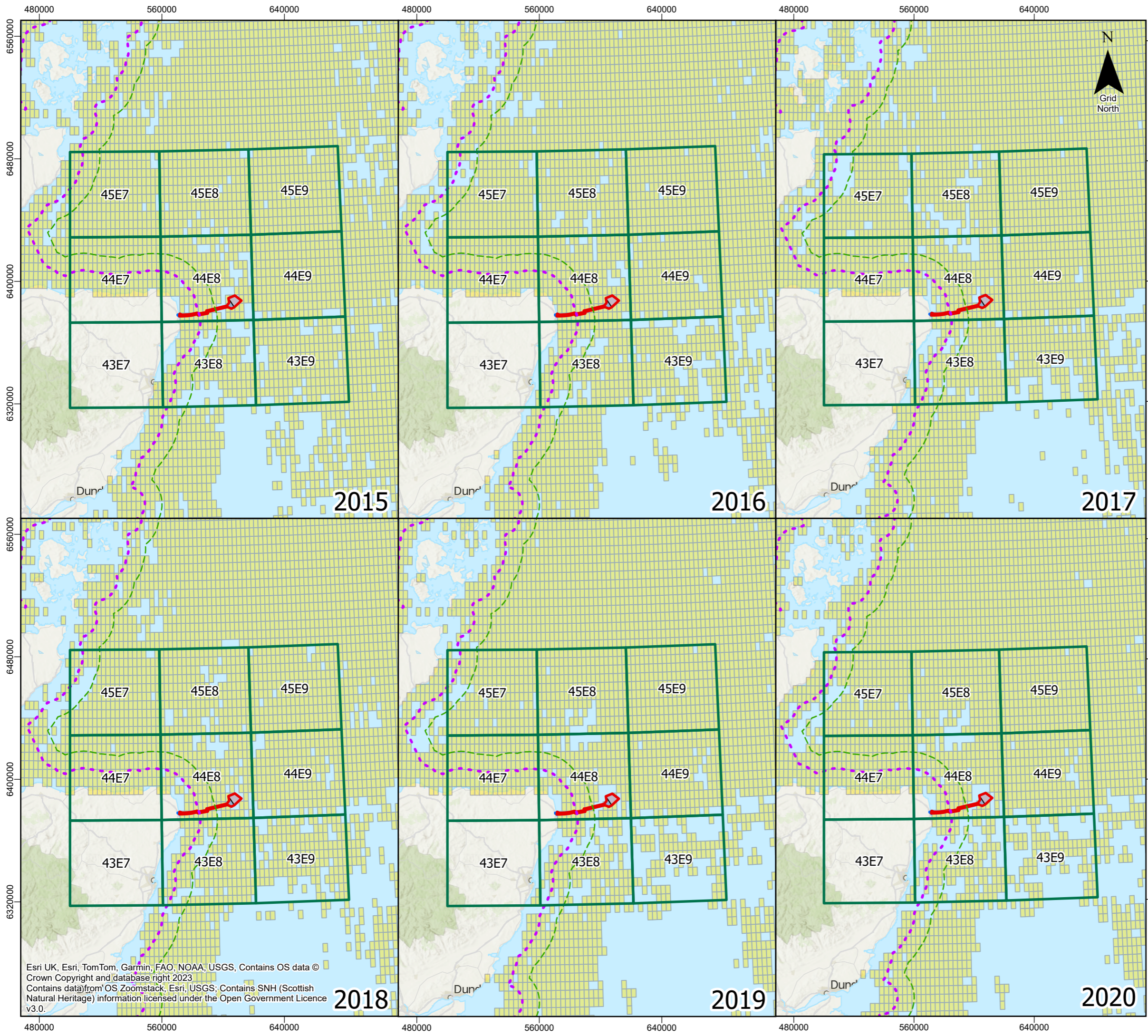
Coordinate System: WGS 1984 UTM Zone 30N  
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 0 20 40 Kilometers  
 0 5 10 20 Nautical Miles

Rev	Description	Date
01	Final Issue	28/03/2024
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Doc. Title : Otter trawling activities within the Study Area (2015-2020)  
 Doc. No : SWF01ER0341  
 Created by : NB  
 Checked by : IW  
 Approved by : AM



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# Salamander

## Figure 13-13

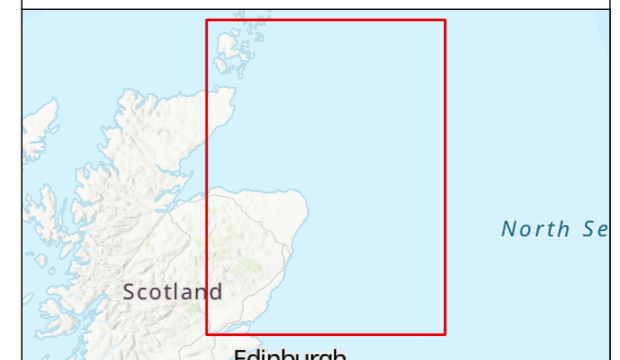
Activity of handliners within the Study Area (2015-2020) (MMO, 2021)

**Legend**

- Offshore Development Area
- Offshore Array Area
- Indicative Onshore Development Area
- Offshore Export Cable Corridor
- Commercial Fisheries Study Area
- 6nm limit
- 12nm limit

**UK Fishing activity (Line gears) - Hours**

- < 1
- 1 - 2
- 2 - 4
- 4 - 8
- 8 - 16
- > 16



Coordinate System: WGS 1984 UTM Zone 30N  
 Scale @ A3 : 1:760,000

0 20 40 Kilometers  
 0 5 10 20 Nautical Miles

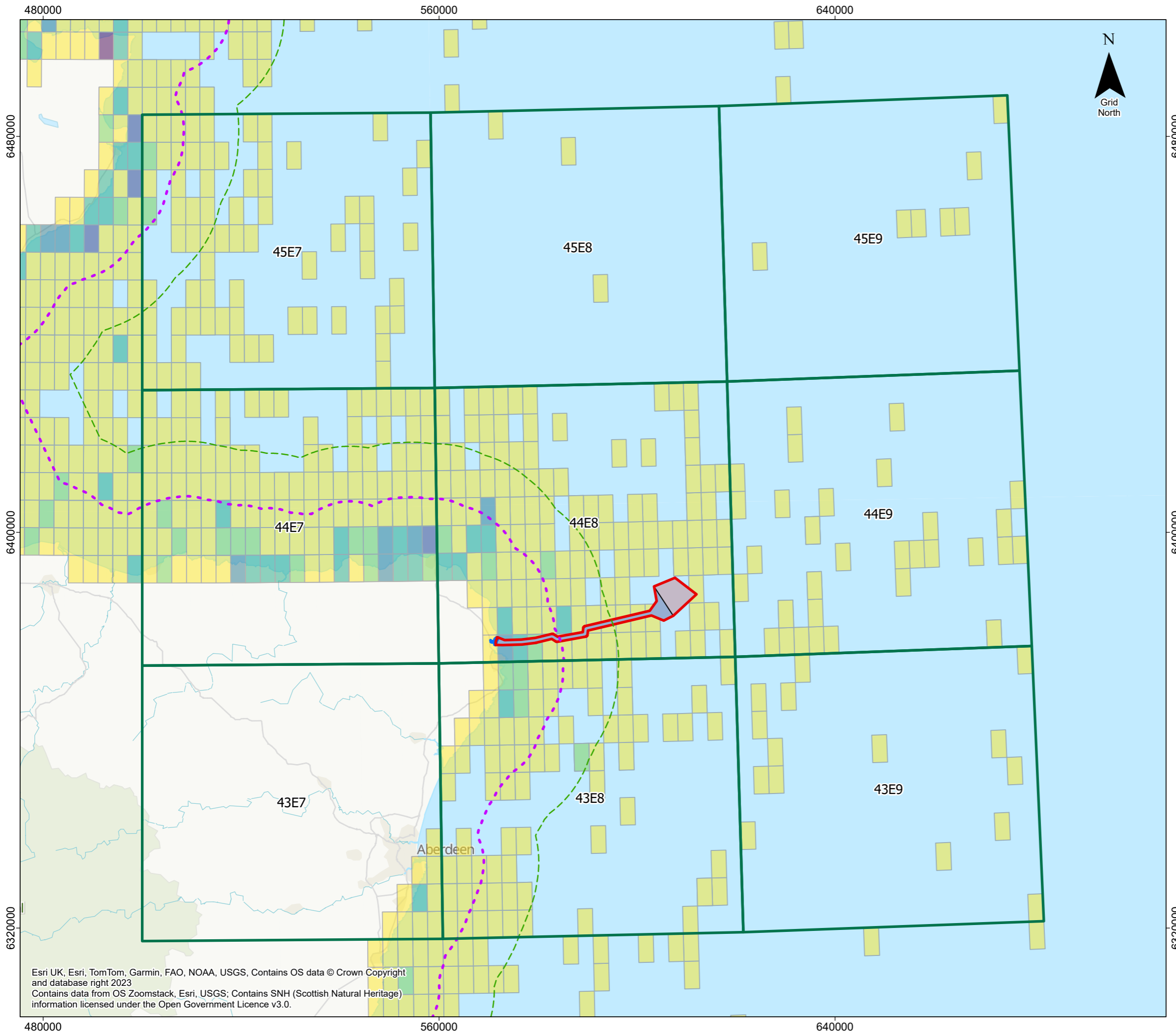
Rev	Description	Date
01	Final Issue	28/03/2024
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Doc. Title : Activity of handliners within the Study Area (2015-2020)  
 Doc. No : SWF01ER0342  
 Created by : NB  
 Checked by : IW  
 Approved by : AM

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# Salamander

Figure 13-14

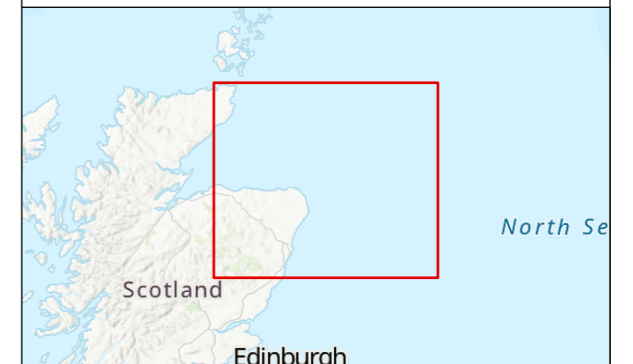
Scottish Fishing Vessels <12 m (Marine Scotland (now Marine Directorate), 2022)

### Legend

- Offshore Development Area
- Offshore Array Area
- Offshore Export Cable Corridor
- Indicative Onshore Development Area
- 6nm limit
- 12nm limit
- Commercial Fisheries Study Area

Scottish fishing vessels (<12m) annual averages 2017 to 2021 - Value

- < £5,000
- £5,000 - 10,000
- £10,000 - 20,000
- £20,000 - 40,000
- £40,000 - 80,000
- > £80,000



Coordinate System: WGS 1984 UTM Zone 30N

Scale @ A3 : 1:750,000

0 20 40 Kilometers

0 5 10 20 Nautical Miles

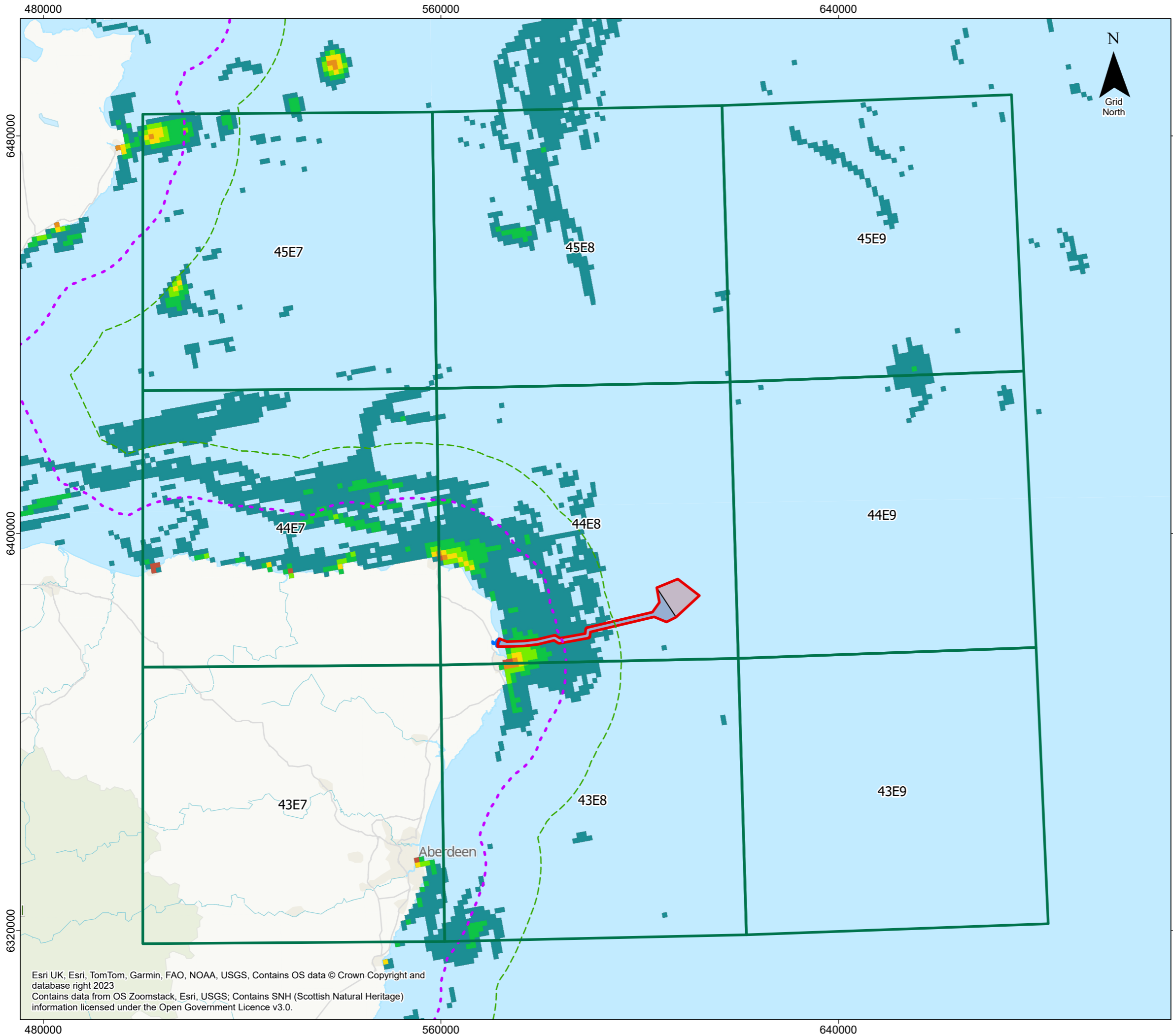
Rev	Description	Date
01	Final Issue	27/03/2024
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Doc. Title : Scottish Fishing Vessels <12 m (Marine Directorate, 2022)  
Doc. No : SWF01ER0343

Created by : NB  
Checked by : IW  
Approved by : AM



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# Salamander

Figure 13-15  
Fishing Vessel Density 2022  
(EMODnet, 2022)

## Legend

- Offshore Development Area
- Offshore Array Area
- Offshore Export Cable Corridor
- Indicative Onshore Development Area
- Commercial Fisheries Study Area
- 6nm limit
- 12nm limit

Commercial Fisheries vessel activity  
2022 (Hours per km / month)

- <0.5
- 0.5 - 2
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 100
- >100



Coordinate System: WGS 1984 UTM Zone 30N

Scale @ A3 : 1:750,000

0 20 40 Kilometers

0 5 10 20 Nautical Miles

Rev	Description	Date
01	Final Issue	03/04/2024
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Doc. Title : Fishing Vessel Density 2022 (EMODnet, 2022)

Doc. No : SWF01ER0344

Created by : NB

Checked by : IW

Approved by : AM



## Management Restrictions

- 13.7.1.43 Previously, fisheries management restrictions for conservation of fish species including sandeels and sea bass were in place within the Study Area, and relevant to the Offshore Development Area. In the case of sandeel, restrictions occurred on a seasonal basis from 1<sup>st</sup> January to the 31<sup>st</sup> of March and set minimum mesh sizes. Now, these measures are effectively redundant since sandeel fishing is not permitted in Scottish waters, with an aim to protect the wider marine ecosystem. Further actions taken to protect fish species includes a prohibition on the fishing or retaining sea bass to protect spawning aggregations, remaining in effect within 43E8 and 43E9, these are currently scheduled to come into force in late March 2024.
- 13.7.1.44 Similarly, a restricted area for the conservation of vulnerable marine ecosystems is located in part within ICES Rectangle 44E7 and 44E8 off the coast of Fraserburgh. Here, it is prohibited to deploy any bottom set gillnet, entangling net or trammel net at any position where the charter depth is greater than 200 m, although there are derogations for hake and anglerfish (EU 2019). Since this legislation was put in place in 2019, the impacts of this legislation are captured within the data set, with no obvious effect visible within the data.
- 13.7.1.45 Aberdeen to Mons Craig represents another management measure taken within the Study Area, ICES Rectangle 43E7. This legislation prohibits fishing for sea fish with mobile or active gear between October 1<sup>st</sup> and 31<sup>st</sup> of March. This includes gear types such as dredges, trawls (bottom and midwater), seine nets and encircling nets (SSI 2004, No.276 (Art 3)). In place for more than a decade, this legislation may explain why passive methods account for such a large proportion of catches with 43E7.

## Salmon Fisheries

- 13.7.1.46 Scottish salmon fisheries are comprised of fixed engine (passive nets which fish actively swim into) and net and cobble, that used in a sweeping motion to surround fish to draw them towards the bank and rod fisheries. Whilst the majority of salmon fishing utilises the rod and line method, there are several coastal netting sites along the Scottish east coast near Peterhead. The closest salmon fishery to the Offshore Development Area is the net and coble fishing site location approximately 5 km south of the Offshore ECC.
- 13.7.1.47 Catches of salmon have declined since 2014 by all capture methods as a result of a reduced stock and restrictions/prohibition on salmon fishing implemented to aid recovery of stock. Particularly, coastal salmon netting has been prohibited since 2016. Similarly, other fisheries may only take captured salmon where river stocks have a favourable conservation status (Marine Directorate, 2019). Given low catches, the salmon fisheries within the area are considered recreational and therefore are not considered further within this chapter. Recreational fisheries are discussed in **Volume ER.A.3, Chapter 18: Other Users of the Marine Environment**, which does not specifically identify salmon fisheries to be of high recreational value, and instead refers to sea angling as a more dominant recreational fishery.

## 13.7.2 Future Baseline

### European Union Exit

- 13.7.2.1 Looking towards the future, the Study Area is likely to experience a degree of change during the lifecycle of the Salamander Project. The baseline for commercial fisheries is constantly evolving; the fishing industry is highly dynamic and is influenced by a myriad of actors. Frequent and sometimes unpredictable changes in fish abundance and distribution, climatic conditions, management regulations, economics and fuel costs, all have the potential to impact commercial fisheries. Whilst a wide range of scenarios are possible considering the drivers at play, here we consider impacts that may arise through recognised impact pathways.

- 13.7.2.2 On 31 January 2021, the UK withdrew from the European Union, becoming an independent coastal state. Following the departure of the UK from the EU's Common Fishery Policy (CFP), regulation of the Scottish fishing industry became devolved to Scotland, within the bounds of UK legislative and policy framework, such as the UK Fisheries Act 2020.
- 13.7.2.3 To manage stocks of fish that cross international boundaries, and to ensure sustainable exploitation of fisheries resource and quota, the UK and EU agreed the Trade and Cooperation Agreement (TCA). Within this agreement, the framework of annual fisheries consultations covers matters, such as setting Total Allowable Catch (TACs) for shared fish stocks, granting fishing vessels access waters and the implementation of technical measures to conserve fish stocks and related matters. The TCA agreement indicates the percentage allocated to the EU and the UK for each shared fish stock, representing a share of the total catch limit that each party in the agreement is entitled to; crucially, 25% of the EU's fishing rights in UK waters are to be transferred progressively to the UK's fleets between 2021 and 2026, with 60% transferred in 2021. After 2026 access to waters will be decided in consultations and may alter domestic landings. Therefore, the outcomes of these consultations will influence the future of fishing for the Scottish fleet and associated trade. This political shift has reshaped fisheries relations within the North Atlantic region, and the consequences are yet unknown.
- 13.7.2.4 Quota increases have largely been gained on species that the Scottish fleet does not target, whilst reductions have been seen in favoured quotas. Under the EU, Scotland received an 82.7% of whiting share compared to the maximum UK quota of 73.5%. Broadly speaking, there have been some increased quotas for pelagic species, compared to declines for demersal species. Furthermore, exporters of Scottish fish and shellfish are facing additional barriers in the form of tariffs to export (Forse *et al.*, 2021). At the time of writing, uncertainty still remains as to the actual impacts of the UK's withdrawal from the CFP and how fishing activity may alter in and around the Offshore Development Area across the lifetime of the Salamander Project.

### Climate Change

- 13.7.2.5 Under projections for future climate change, warming of sea surface temperatures and other variables may result in distributional shifts of commercially important species in response to changing habitat suitability. Current observations in the North-East Atlantic provide evidence for shifting abundances of species with affinity to temperature regimes. In the absence of strong temperature gradients, a northward creep of warm adapted species is observed, and a concurrent regression of cool adapted species at a rate consistent with average warming (Burrows *et al.*, 2019). At a local scale, changes in abundances will be modulated by seabed features, depth, fisheries and other pressures.
- 13.7.2.6 Migrations of species such as mackerel and herring, important within the Study Area may also shift in relation to changes in thermal and salinity fronts. Cold water species including Atlantic herring have reduced in abundance, whilst hake and mackerel have increased in occurrence. Alterations to species distribution and abundance is likely to impact on commercial fisheries as northwestern European waters are predicted to become less suitable for species traditionally targeted by commercial fisheries operators and may potentially prompt a change in fisheries management (Townhill *et al.*, 2023). An example of this is the emergence of summer squid fisheries east of Scotland, in response to a local increase in squid populations (van der Kooij *et al.*, 2016). Whilst climate change may offer both challenges and new opportunities for commercial fisheries, it is understood the current baseline will be suitable to assess impacts on commercial fisheries throughout the lifetime of the Salamander Project. A detailed assessment of the impacts related to climate change and the Salamander Project is presented in **Volume ER.A.3, Chapter 20: Climate Change and Carbon.**

### 13.7.3 Summary of Baseline Environment

- 13.7.3.1 An array of official landings and activity data, reports, additional information and feedback from direct consultation and liaison with individual vessels has been assessed to characterise the Commercial Fisheries baseline within the Study Area. The review has concluded that whilst fishing activities occur in and around the OAA and Offshore ECC, these cannot be considered especially intense, compared with surrounding areas in the Central North Sea.
- 13.7.3.2 ICES Rectangle 44E8 supports moderate numbers of vessels deploying static gear targeting lobsters and crabs, and otter trawls for demersal species and dredging for scallops. Catches are modest compared with surrounding ICES Rectangles. Smaller vessels, predominantly in nearshore regions use traps for crabs and lobsters whilst mackerel is caught using gear using hooks. Mackerel and herring are particularly important in the late summer and autumn months for vessels of all sizes. Larger vessels operate scallop dredgers and otter trawls, for shellfish for the former and demersal species in the latter instance.

#### Receptor Groups

- 13.7.3.3 From the overview of the Commercial Fisheries baseline environment presented in the previous sections, it is clear to note that there is a range of UK and non-UK fleets targeting a number of different fisheries in the Commercial Fisheries Study Area. The diverse nature of these fleets and fisheries means that potential impacts from the Salamander Project will vary depending on the fleet concerned.
- 13.7.3.4 To ensure that potential impacts which may affect certain fleets/fisheries in different ways are fully assessed, a number of commercial fisheries receptor groups have been identified through review of data and feedback from stakeholder consultation. A total of six main receptor groups have been defined. These have been beneficial based on gear type, nature of fishing activity and nationality and are summarised in **Table 13.6**.

**Table 13.6 Key commercial fisheries receptor groups used in this assessment**

Receptor group	Summary	Active in Offshore Export Cable Corridor	Active in Offshore Array Area
Potters	Fishers using this passive gear target crabs and lobsters and are responsible for a large proportion of value catches within 44E8 and the wider Study Area. These fishers generally utilise vessels less than 10 m and are of Scottish and English nationality. Potting is an important resource for 43E7, 43E8, 44E7, 44E8 and 45E8. In 44E8 catches are landed at many ports including Aberdeen, Arbroath, Boddam, Cairnbulg, Fraserburgh, Gardenstown, Macduff, Peterhead, Port Erroll, Portknockie, Whitehills and Wick.	Yes	No
Handliners / Gears using hooks	This receptor group typically use this gear to exclusively target mackerel from boats less than 10 m in length. This receptor is entirely Scottish and 44E8 land their catch within Portsoy, Roseheart, Whitehills and Sandhaven and Pitouille. Handliners are spatially limited and generally fish within ICES Rectangles 44E7 and 44E8.	Yes	No

Receptor group	Summary	Active in Offshore Export Cable Corridor	Active in Offshore Array Area
Scallop Dredgers	<p>Exclusively targeting scallops from vessels greater than 10 m in length. Dredgers are very important within 43E8, 44E8 and 45E7. In the Study Area, the majority of scallop dredgers are Scottish although some English vessels participate.</p> <p>In 44E8, scallop dredgers land their catch in ports including Buckie, Macduff and Peterhead.</p>	Yes	No
Otter Trawls	<p>This receptor targets a range of species including haddock, herring, mackerel and nephrops as well as monks and anglers, squid and whiting in smaller quantities. The nationality of those utilising otter trawls is predominately Scottish, but includes English, Northern Irish and non-UK vessels.</p> <p>Demersal trawling is important throughout the Study Area, particularly important areas include 43E9, 44E7, 44E8, 44E9, 45E8 and 45E9. Catches from 44E8 are often landed in Burghead, Gairloch, Kinlochbervie and Mallaig and Peterhead.</p>	Yes	Yes
Pelagic trawls	<p>Pelagic trawls are generally restricted to ICES Rectangles further offshore in the Study Area, including 43E9 and also 44E8.</p> <p>Within 44E8, catches of herring are landed in Mallaig, although pelagic trawls do not make up a large portion of catches within this ICES Rectangle.</p>	Yes	No

## 13.8 Limitations and Assumptions

- 13.8.1.1 The following limitations and assumptions have been identified for the Commercial Fisheries assessment. It is acknowledged that the existing baseline is a reflection of legislation, management, quotas, economic constraints and weather constraints which vary year to year and create artefacts within the data. Smaller vessels are not covered by VMS or AIS data, which leads to associated difficulties determining the fishing, transiting or stationary status of vessels (factors that would otherwise be derived from VMS data).
- 13.8.1.2 Therefore, any changes in the aforementioned parameters could result in a change in the baseline relation. More specifically, these may include fishing effort, cost of fuel, location of fishing and annual variations in the ecology of target species or a combination of all of these factors, contributing to uncertainties going forward. Limitations to the data sources have been fully acknowledged in **Section 13.6.2**.

### 13.8.2 Impacts Scoped Out of the Environmental Impact Assessment Report

- 13.8.2.1 The Commercial Fisheries assessment covers all potential impacts identified during scoping, as well as any further potential impacts that have been highlighted as the EIA has progressed.
- 13.8.2.2 Following consideration of the baseline environment, the Salamander Project description outlined in **Volume ER.A.2, Chapter 4: Project Description** and in line with the Scoping Opinion (MD-LOT, 2023) all impacts remain scoped in and will be considered fully.

### 13.8.3 Embedded Mitigation

- 13.8.3.1 The embedded mitigation relevant to the Commercial Fisheries assessment is presented in **Table 13.7**.

**Table 13.7 Embedded Mitigation for the Commercial Fisheries assessment**

Potential Impact and Effect	Mitigation ID	Mitigation	Project Aspect	Project Phase
<i>Primary</i>				
Loss or restricted access to fishing grounds;  Displacement of fishing activity into other areas;  Safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure).	Co14	Avoidance of sensitive features during cable routing wherever practicable. Cables will be buried as the primary cable protection method, however other cable protection methods will be used where adequate burial cannot be achieved. A Cable Burial Risk Assessment (CBRA) will be completed to determine suitable cable protection measures, and will be implemented within relevant Project plans.	Offshore ECC and OAA	Construction
<i>Tertiary</i>				
Loss or restricted access to fishing grounds;  Displacement of fishing activity into other areas;  Interference with fishing activity as a result of increased vessel traffic;  Potential impacts on commercially important	Co9	Construction Environmental Management Plan (CEMP) will be developed and will include details of:  - A Marine Pollution Contingency Plan (MPCP) to address the risks, methods and procedures to protect the Offshore Development Area from potential polluting events associated with the Salamander Project;  - A chemical risk review to include information regarding how and when chemicals are to be used, stored and	Offshore ECC and OAA	Construction, Operation and Maintenance, and Decommissioning

Potential Impact and Effect	Mitigation ID	Mitigation	Project Aspect	Project Phase
fish and shellfish resources.		<p>transported in accordance with recognised best practice guidance;</p> <ul style="list-style-type: none"> <li>- A biosecurity plan (offshore) detailing how the risk of introduction and spread of invasive non-native species will be minimised;</li> <li>- Waste management and disposal arrangements; and</li> <li>- Protocol for management of Dropped Objects.</li> </ul>		
<p>Loss or restricted access to fishing grounds;</p> <p>Displacement of fishing activity into other areas;</p> <p>Safety considerations for fishing vessels ( via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure);</p> <p>Interference with fishing activity as a result of increased vessel traffic;</p> <p>Increased steaming times.</p>	Co11	<p>A Vessel Management Plan (VMP) will be developed and include details of:</p> <ul style="list-style-type: none"> <li>- Vessel routing to and from construction sites and ports,</li> <li>- Vessel notifications including Notice to Mariners and Kingfisher Bulletin; and</li> <li>- Code of conduct for vessel operators including for the purpose of reducing disturbance and collision with marine fauna.</li> </ul>	Offshore ECC and OAA	Construction, Operation and Maintenance, and Decommissioning
<p>Loss or restricted access to fishing grounds;</p> <p>Displacement of fishing activity into other areas;</p> <p>Safety considerations for fishing vessels (via loss or damage to gear due</p>	Co18	All vessels will comply with relevant best practice navigational safety guidance from the International Regulations for the Prevention of Collisions at Sea (COLREGs) and the international regulations for the Safety of Life at Sea (SOLAS).	Offshore ECC and OAA	Construction, Operation and Maintenance, and Decommissioning



Potential Impact and Effect	Mitigation ID	Mitigation	Project Aspect	Project Phase
<p>to snagging or entanglement with offshore and floating infrastructure);</p> <p>Interference with fishing activity as a result of increased vessel traffic;</p> <p>Increased steaming times.</p>				
<p>Loss or restricted access to fishing grounds;</p> <p>Displacement of fishing activity into other areas;</p> <p>Safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure);</p> <p>Interference with fishing activity as a result of increased vessel traffic.</p>	Co19	Development and adherence to a FMMS e.g. appointment of Fisheries Liaison Officer (FLO) and Fisheries Industry Representative (FIR), implementation of gear claim procedures and use of Guard vessels where required.	Offshore ECC and OAA	Construction, Operation and Maintenance, and Decommissioning
<p>Safety considerations of fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure)</p>	Co36	The Salamander Project will utilise Guard vessel(s), as required by risk assessment.	Offshore ECC and OAA	Construction, Operation and Maintenance, and Decommissioning
<p>Loss or restricted access to fishing grounds;</p> <p>Displacement of fishing activity into other areas;</p>	Co34	The Salamander Project will provide details of offshore development to facilitate appropriate marking of all infrastructure on UKHO Admiralty Charts to the UKHO.	Offshore ECC and OAA	Construction

Potential Impact and Effect	Mitigation ID	Mitigation	Project Aspect	Project Phase
<p>Safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure);</p> <p>Interference with fishing activity as a result of increased vessel traffic;</p> <p>Increased steaming times;</p>				
<p>Loss or restricted access to fishing grounds;</p> <p>Displacement of fishing activity into other areas;</p> <p>Safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure);</p> <p>Interference with fishing activity as a result of increased vessel traffic;</p> <p>Increased steaming times.</p>	Co24	<p>Standard 500 m safety zones will be applied around substructure elements during construction, decommissioning and major maintenance works and safety zones of up to 50 m during pre-commissioning works. Additionally, 500 m advisory safe passing distance will also be requested around all project vessels undertaking major works and restriction of navigation rights within the OAA will be considered under Section 36A.</p>	Offshore ECC and OAA	Construction, Operation and Maintenance, and Decommissioning

### 13.9 Project Design Envelope Parameters

- 13.9.1.1 Given that the realistic worst-case scenario is based on the design option (or combination of options) that represents the greatest potential for change, as set out in **Volume ER.A.2, Chapter 4: Project Description**, confidence can be taken that development of any alternative options within the Salamander Project Design Envelope parameters will give rise to no effects greater or worse than those assessed in this impact

assessment. The Salamander Project Design Envelope parameters relevant to the Commercial Fisheries assessment are outlined in **Table 13.8**.

Table 13.8 Project Design Envelope parameters for Commercial Fisheries

Potential Impact and Effect	Project Design Envelope parameters
<i>Construction</i>	
Loss or restricted access to fishing grounds	<p>Spatial extent</p> <ul style="list-style-type: none"> <li>• Total area of OAA: 33.25 km<sup>2</sup></li> <li>• Total area of Offshore ECC: 47.40 km<sup>2</sup></li> </ul> <p>Loss or restricted access to fishing grounds due to:</p> <ul style="list-style-type: none"> <li>• Duration: Offshore construction period has a window of 2.5 years, however, construction will only take place over a period of 18 months (excluding pre-construction surveys). During this period, the realistic worst-case scenario for loss or restricted access to fishing grounds during construction is that fishing activity is to be excluded from the entire Offshore Development Area (inclusive of both the OAA and Offshore ECC) for the duration of works.</li> <li>• Statutory safety zones: 500 m safety zones around Offshore Renewables Energy Installations (OREIs) during construction.</li> <li>• Safety zones of 50 m around all incomplete offshore works where construction activity may have been temporarily paused or where construction works are complete but associated infrastructure has not yet been commissioned.</li> <li>• Advisory safe passing distances of 500 m around all installation vessels during construction, e.g. around cable installation vessels as they move along the cable route.</li> </ul> <p>Seabed preparation:</p> <p>Sandwave levelling (within OAA)</p> <ul style="list-style-type: none"> <li>• Localised sandwave height (in sandwave areas) = ≤2 m</li> <li>• Maximum volume of material that will be subject to sandwave levelling for gravity anchors (≤48,600 m<sup>3</sup>) and / or offshore inter-array cables (1,624,000 m<sup>3</sup>): Total = 1,672,600 m<sup>3</sup>.</li> </ul> <p>Sandwave levelling (within Offshore ECC)</p> <ul style="list-style-type: none"> <li>• Localised sandwave height (in sandwave areas) = 4 to 5 m</li> <li>• Maximum volume of material that will be subject to levelling: ≤5,576,000 m<sup>3</sup></li> </ul> <p>The total seabed disturbance from boulder clearance cannot be fully defined until more detailed pre-construction surveys are undertaken.</p>

Potential Impact and Effect	Project Design Envelope parameters
	<p>Reduction of access around infrastructure during construction:</p> <p>Floating substructures:</p> <ul style="list-style-type: none"> <li>• Maximum number of units: 7</li> <li>• Maximum dimensions : 140 m x 140 m (semi-submersible)</li> <li>• Maximum draught (during operation): 40 m (TLP)</li> <li>• Spacing between turbines: <math>\geq 1,000</math> m.</li> </ul> <p>Mooring system:</p> <ul style="list-style-type: none"> <li>• Maximum number of mooring lines present in the water column: 56 mooring lines (7 floating substructures x 8 lines)</li> <li>• Maximum mooring line diameter (wire/rope/cable): 300 mm</li> <li>• Mooring line radius: <math>\leq 1,500</math> m.</li> </ul> <p>Inter-array cables:</p> <ul style="list-style-type: none"> <li>• <math>\leq 8</math> inter-array cables for <math>\leq 7</math> floating substructures units x 1 inter-array cable per turbine; however, depending on inter-array topology there may be two inter-array cables for some turbines.</li> <li>• Diameter of inter-array cable: <math>\leq 320</math> mm</li> <li>• Total Area of seabed disturbance during installation: <math>\leq 1,400,000</math> m<sup>2</sup></li> <li>• Total number of inter-array subsea joints: <math>\leq 16</math>, with joint dimensions at <math>\leq 6 \times 2 \times 2</math> m</li> <li>• Up to 35 km of inter-array cables, with static sections buried to a minimum depth of lowering of 0.6 m (where technically possible)</li> <li>• Inter-array cable protection: up to 7 km (20% of total length) of inter-array cables may require cable protection (rock placement, concrete mattresses, grout/rock bags or frond mattresses) up to a height of 1.5 m and a width of 10 m.</li> </ul> <p>Dynamic cable segments of inter-array cables:</p> <ul style="list-style-type: none"> <li>• Total length of cable suspended in water column: <math>\leq 3,500</math> m with total length of buoyancy module sections: <math>\leq 1,400</math> m.</li> </ul>

Potential Impact and Effect	Project Design Envelope parameters
	<ul style="list-style-type: none"> <li>• Outer diameter of buoyancy modules: <math>\leq 1.5</math> m</li> <li>• Total area of seabed swept by dynamic cables: <math>\leq 700,000</math> m<sup>2</sup>.</li> </ul> <p>Anchors:</p> <ul style="list-style-type: none"> <li>• Max number of gravity base anchors on seabed: 8 per wind turbine generator / floating substructure, 56 in total</li> <li>• Dimensions of gravity base anchors once installed: 13.5 m diameter, <math>\leq 5</math> m above seabed</li> <li>• Max number of subsea hub(s) pile anchors (<math>\leq 1.5</math> m diameter): 24</li> <li>• Total volume of anchor scour protection, including gravel bed for anchors: <math>\leq 266,300</math> m<sup>3</sup>.</li> </ul> <p>Subsea Hubs:</p> <ul style="list-style-type: none"> <li>• Number of subsea hubs: <math>\leq 2</math></li> <li>• Dimensions of the subsea hubs once installed: 15 m x 15 m, <math>\leq 10</math> m above the seabed</li> <li>• Total seabed disturbance from subsea hubs: <math>\leq 7,000</math> m<sup>2</sup>.</li> </ul> <p>Offshore Export Cable:</p> <ul style="list-style-type: none"> <li>• Up to 85 km of export cables, buried to a minimum depth of lowering of 0.6 m (where technically possible)</li> <li>• Export cable protection: up to 17 km (20% of total length) of export cables may require cable protection (articulated pipe, rock placement, concrete mattresses, grout/rock bags or frond mattresses) up to a height of 1.5 m and a width of 10 m.</li> <li>• Export cable crossings: Up to 24 crossings with concrete mattresses/frond mattress/rock berm. Maximum dimensions for each crossing – 2 m height x 800 m length x 20 m width.</li> </ul> <p>Vessel Activity:</p> <ul style="list-style-type: none"> <li>• Up to a total of up to 12 vessels and a support barge could be found in a given 5 km<sup>2</sup> area on site at any one time. This level of activity is unlikely to occur across the entire Offshore Development Area but may be expected to occur simultaneously within two areas of 5 km<sup>2</sup> across the OAA and Offshore ECC.</li> <li>• Up to 303 vessel anchor deployments (63 (during mooring and anchor installation) + 240 (during cable installation)).</li> </ul>

Potential Impact and Effect	Project Design Envelope parameters
Displacement of fishing activity into other areas	As for 'Loss or restricted access to fishing grounds' for construction – see above.
Interference with fishing activity as a result of increased vessel traffic	As for 'Loss or restricted access to fishing grounds' for construction – see above.
Increased steaming times	<p>Maximum potential disruption to established steaming routes.</p> <p>As for 'Loss or restricted access to fishing grounds' for construction – see above.</p> <p>It should be noted that although increased steaming times may occur over the duration of the construction period (≤18 months), any disruption will be of local spatial extent, intermittent and reversible.</p>
Safety considerations for fishing vessels	<p>Safety issues for fishing vessels in transit – as described in <b>Volume A.3, Chapter 14: Shipping and Navigation</b> of the EIAR.</p> <p>Safety issues for fishing vessels deploying gear, i.e. via entanglement – as for 'Loss or restricted access to fishing grounds' for construction – see above.</p>
Potential impacts on commercially important fish and shellfish resources	There are no significant impacts identified for receptors within the Fish and Shellfish Ecology chapter and therefore, no impact on commercially important fish and shellfish resources. As described in <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> of the EIAR.
Supply chain opportunities for local fishing vessels	<ul style="list-style-type: none"> <li>• Potential provision of fishing vessels for visual checks of project infrastructure.</li> <li>• Potential provision of fishing vessels for scouting surveys.</li> <li>• Potential provision of fishing vessels for use as guard vessels.</li> <li>• Potential for Offshore Fisheries Liaison Officer (OFLO) duties.</li> </ul>
<i>Operation and Maintenance</i>	
Loss or restricted access to fishing grounds	<p>Operation duration: 35 years.</p> <p>Operation safety zones: Standard 500 m safety zones will be applied around substructure elements during major maintenance works. Additionally, 500 m advisory safe passing distance will also be requested around all project vessels undertaking major works and restriction of navigation rights within the OAA or Offshore ECC.</p>

Potential Impact and Effect	Project Design Envelope parameters
	<p>Up to 14 subsea cable repair/replacement events are anticipated for the Offshore Development (≤8 within the OAA and ≤6 within the Offshore ECC), as well as up to 40 mooring and anchor replacement events.</p> <p>The presence of permanent project infrastructure including floating substructures and mooring lines and inter-array cables located both within the water column and on the seabed, will mean the majority of the OAA will not be able to be fished safely by otter trawlers and scallop dredgers. This has been confirmed via consultation with commercial fisheries stakeholders currently active in this region. However, handlining and potting are already well established within the Commercial Fisheries Study Area and may be able to continue to fish within the operational wind farm. Any cable repair/remediation events or major maintenance events offshore like mooring/anchor replacement or re-tensioning, tow to port operations etc., required in the operation and maintenance phase will be temporary and spatially limited, vessels would be requested to avoid such areas (via the standard 500 m safety zones applied around substructure elements during major maintenance works and 500 m advisory safe passing distance around all project vessels) for the short-term duration of any such works.</p>
Displacement of fishing activity into other areas	As for 'Loss or restricted access to fishing grounds' for operations and maintenance – see above.
Interference with fishing activity as a result of increased vessel traffic	<p>Operation duration: 35 years.</p> <p>Up to a total of 12 operation and maintenance vessels within the Offshore Development Area at any one time.</p> <p>Up to 210 operation and maintenance vessel trips (return trips) each year.</p>
Increased steaming times	<p>Maximum potential disruption to established steaming routes.</p> <p>As for 'Loss or restricted access to fishing grounds' for operations and maintenance – see above.</p>
Safety considerations for fishing vessels	<p>Safety issues for fishing vessels in transit – as described in <b>Volume ER.A.3, Chapter 14: Shipping and Navigation</b> of the EIAR.</p> <p>Safety issues for fishing vessels deploying gear, i.e. via entanglement – as for 'Loss or restricted access to fishing grounds' for construction – see above.</p>
Potential impacts on commercially important fish and shellfish resources	There are no significant impacts identified for receptors within the Fish and Shellfish Ecology chapter and therefore, no impact on commercially important fish and shellfish resources. As described in <b>Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology</b> of the EIAR.



Potential Impact and Effect	Project Design Envelope parameters
Supply chain opportunities for local fishing vessels	There may be opportunities for commercial fishing vessels to provide marine operation support during the operation and maintenance phase (35 years) of the Salamander Project, such as OFLO duties during periods of major maintenance and guard vessel requirements.

#### Decommissioning

At this stage, the worst-case scenario envelope during decommissioning is considered equal to the worst-case scenario during construction, with the exception of vessel trips, where more detailed information is available. Noting this, it is assumed that the worst-case scenario will involve full removal of all infrastructure placed during the construction phase. This assumption is subject to best practice methods and technology appropriate at the time of decommissioning.

### 13.10 Assessment Methodology

- 13.10.1.1 **Volume ER.A.2, Chapter 6: EIA Methodology** sets out the general approach to the assessment of potentially significant effects that may arise from the Salamander Project.
- 13.10.1.2 Whilst **Volume ER.A.2, Chapter 6: EIA Methodology** provides a general framework for identifying impacts and assessing the significance of their effects, in practice the approaches and criteria applied across different topics vary.
- 13.10.1.3 The proposed approach to the Commercial Fisheries assessment that has been addressed in the EIA is outlined below.
- 13.10.1.4 The assessment of impacts to commercial fisheries arising throughout the lifetime of the Salamander Project is based on a desk-based review of available data (See **Table 13.4**) in combination with engagement with commercial fisheries stakeholders. Consultation has been undertaken with key stakeholders including SFF SWFPA and N&ECRIFG. Questionnaires were also distributed to individual vessels to confirm and expand baseline data, and identify opinions and/or concerns so these might be mitigated against.
- 13.10.1.5 Impacts from the Salamander Project are likely to arise from an interaction of a number of effectors, therefore both direct and indirect impacts are considered through relevant impact pathways so that all aspects of change are considered to ensure a holistic approach. Potential impacts described below are built on those identified within the Salamander EIA Scoping Report (SBES, 2023), and any other potential impacts identified in consultations with stakeholders. One example of this would be the potential for displacement of stock from the Offshore Development Area due to maintenance activities resulting in reduced stock.
- 13.10.1.6 Specific criteria relevant to commercial fisheries have been developed to describe the sensitivity of the receptor (**Table 13.9**) and the magnitude of impact (**Table 13.10**). It should be noted that beneficial impacts as a result of the Salamander Project are also possible. In such a case, the same definitions would apply as in **Table 13.10**, albeit in reverse (e.g. the impact would affect an area from which a minor proportion (5-10%) of a commercial fishing receptor's annual value of landings is caught and/or would lead to a minor (5-10%) increase in annual value of landings). Each aspect (sensitivity and magnitude) was considered against available evidence, including official data sources, feedback from consultation and expert judgement. For each impact pathway identified, the impact will be derived from realistic worst-case design scenarios as per the Salamander Project Design Envelope. Specific parameters relating to potential impacts can be found in **Table 13.8**.

Table 13.9 Definition of Sensitivity for a Commercial Fisheries receptor

Receptor Sensitivity	Definition
<b>High</b>	<p>Receptor is highly vulnerable to impacts that may arise from the Salamander Project and recoverability is long term or not possible.</p> <p>Receptor has very low spatial adaptability due to limited operational range and/or very low ability to deploy more than one gear type.</p> <p>Receptor has very limited spatial tolerance due to dependence upon a single ground.</p> <p>Receptor has very low recoverability due to inability to mitigate loss of fishing area by operating in alternative areas.</p>
<b>Medium</b>	<p>Receptor is vulnerable to impacts that may arise from the Salamander Project and has limited recoverability, with some ability to mitigate loss of fishing area by operating in alternative areas.</p> <p>Receptor has limited spatial adaptability due to extent of operational range and/or limited ability to deploy an alternative gear type.</p> <p>Receptor has limited spatial tolerance due to dependence upon a limited number of fishing grounds.</p>
<b>Low</b>	<p>Receptor is not particularly vulnerable to impacts that may arise from the Salamander Project and has moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas.</p> <p>Receptor has moderate spatial adaptability due to extensive operational range and/or moderate ability to deploy an alternative gear type.</p> <p>Receptor has moderate spatial tolerance due to the ability to fish numerous fishing grounds.</p>
<b>Negligible</b>	<p>Receptor is not vulnerable to impacts that may arise from the Salamander Project and/or has high recoverability.</p> <p>Receptor has an extensive operational range and high method versatility.</p> <p>Receptor is able to exploit a large number of fisheries.</p>

**Table 13.10 Definition of Magnitude of Impact for a Commercial Fisheries receptor**

Impact Magnitude	Definition
<b>High</b>	The impact would be permanent/irreplaceable change and is likely to occur.
	The impact would permanently affect an area from which the majority (> 50%) of a commercial fishing receptor's annual value of landings is caught and/or would lead to a majority (> 50%) reduction in annual value of landings.
<b>Medium</b>	The impact would be long-term (i.e. 35 years) though reversible, and is likely to occur.
	The impact would affect an area from which a moderate proportion (11 – 50%) of a commercial fishing receptor's annual value of landings is caught and/or would lead to a moderate (11 – 50%) reduction in annual value of landings.
<b>Low</b>	The impact would be short to medium term (i.e. 1 – 4 years) though reversible and could possibly occur.
	The impact would affect an area from which a small proportion (5 – 10%) of a commercial fishing receptor's annual value of landings is caught and/or would lead to a minor (5 – 10%) reduction in annual value of landings.
<b>Negligible</b>	The impact would be short-term (i.e. less than 1 year), intermittent and reversible and unlikely to occur.
	The impact would affect an area from which a very small proportion (< 5%) of a commercial fishing receptor's annual value of landings is caught and/or would lead to a very small (< 5%) reduction in annual value of landings.
<b>No change</b>	No loss or alteration of characteristics, features or elements; no observable impact either adverse or beneficial.

13.10.1.7 The assessment of significance of an effect is informed by the sensitivity of the receptor and the magnitude of the impact. The determination of significance is guided by the use of an impact significance matrix presented in **Volume ER.A.2, Chapter 6: EIA Methodology** and **Table 13.11**. For the purposes of this assessment, any effect that is of major or moderate significance is considered to be significant in EIA terms, whether this be adverse or beneficial. Any effect that has a significance of minor or negligible is not significant.

**Table 13.11 Commercial Fisheries Significance of Effect Matrix**

Significance of effect		Receptor Sensitivity			
		Negligible	Low	Medium	High
Magnitude of impact	Negligible	Negligible	Negligible	Negligible	Negligible
	Low	Negligible	Negligible	Minor	Minor
	Medium	Negligible	Minor	Moderate	Moderate
	High	Negligible	Minor	Moderate	Major

13.10.1.8 Impacts are likely to vary throughout the lifecycle of the Salamander Project, therefore, impacts are split into three project phases:

- Construction;
- Operation and Maintenance; and
- Decommissioning.

### 13.11 Impact Assessment

13.11.1.1 The potential impacts on Commercial Fisheries of the construction, operation and maintenance, and decommissioning phases of the Salamander Project have been assessed. The potential impacts arising from these different phases of the Salamander Project are listed in **Table 13.8**, along with the realistic worst-case scenario against which each impact has been assessed.

13.11.1.2 A description of the potential significance of effect on Commercial Fisheries receptors caused by each identified impact is provided below. Due to the seasonality of activities of the different fishing fleets, the impacts are presumed to occur during the peak activity periods for each receptor group.

13.11.1.3 A description of the significance of effect upon Commercial Fisheries receptors as a result of each potential impact is given below.

#### 13.11.2 Construction

13.11.2.1 Impacts assessed:

- Loss or restricted access to fishing grounds;
- Displacement of fishing activity into other areas;
- Safety considerations for fishing vessels (risks via in transit assessed in **Volume ER.A.3, Chapter 14: Shipping and Navigation** of the EIAR; risks via active fishing, i.e. entanglement, assessed in this Chapter).
- Interference with fishing activity as a result of increased vessel traffic;
- Increased steaming times;

- Potential impacts on commercially important fish and shellfish resources; and
- Supply chain opportunities for local fishing vessels.

### Loss or Restricted Access to Fishing Grounds

13.11.2.2 Throughout the construction period, commercial fishing activities may be affected via the temporary loss of access to fishing grounds, and associated reduction in revenue that might result. Key areas where fishing vessels are likely to be excluded from include:

- The application of safety zones of up to 500 m from the edge of the floating substructure (at sea level) during construction;
- An advisory (temporary) safe passing distance of up to 500 m around all work vessels and areas during construction; and
- 50 m safety zones will be applied for around all incomplete renewable energy installation offshore works at which construction activity may be temporarily paused (and therefore the 500 m safety zone has lapsed) or where construction works are completed but the infrastructure has not yet been commissioned.

13.11.2.3 The realistic worst-case scenario for loss or restricted access to fishing grounds during construction is that fishing activity will be excluded from the entire Offshore Development Area (inclusive of both the OAA and Offshore ECC) for the duration of works (up to 18 months).

### Sensitivity of Receptor

#### *Potters*

13.11.2.4 The potential area from which this receptor group will have reduced access is relatively small (i.e. exclusion of all fishing activity during construction within the Offshore Development Area). However, this receptor group generally constitutes smaller vessels (<10 m) that deploy static gear across limited fishing grounds with suitable habitats for target species, and although these vessels have some ability to deploy alternative gear, this is relatively limited, as is their spatial adaptability. Crabs and lobsters are the predominant value catch within the Study Area, 33% in 44E8, with an area of higher potting intensity seen to overlap with the Offshore ECC. Less productive areas are seen to the north within 44E8 and to the south in 43E8, with no activity seen within the OAA.

13.11.2.5 Potters are deemed to have limited spatial adaptability due to the extent of their operational range and/or limited ability to deploy an alternative gear type. They also have limited spatial tolerance due to dependence on a limited number of fishing grounds. The sensitivity of the receptor is, therefore, considered to be **Medium**.

#### *Handliners and Fishers Using Gear with Hooks*

13.11.2.6 This commercial fisheries receptor group consists of smaller vessels (<10 m) that are active within the commercial fisheries Study Area, targeting seasonally abundant species such as mackerel. Most of the annual landed weight is caught in the summer months, with the highest catch period between July and August, accounting for approximately 79% of the annual catch. This receptor is entirely of Scottish origin. According to landing statistics during the study period (2016 to 2022), this receptor group almost exclusively operates out of ICES Rectangles 44E7 and 44E8; however, limited spatial tolerance is not considered an issue due to the highly mobile nature of the target species.

- 13.11.2.7 Handliners and fishers using gear with hooks are deemed to have moderate spatial adaptability due to extensive operational range and/or moderate ability to deploy an alternative gear type. This receptor also has moderate spatial tolerance due to the ability to fish numerous fishing grounds. The sensitivity of the receptor is, therefore, considered to be **Low**.

#### *Scallop Dredgers*

- 13.11.2.8 This commercial fisheries receptor group generally constitutes larger vessels (>12 m), deploying dredge gear and targeting scallops. Landings within the commercial fisheries Study Area accounted for 8.36% of the total value of catch. Regions of intensive scallop dredging are seen within 44E8, 43E8 and 43E9; there is overlap between this receptor and the Offshore ECC, although the Offshore ECC does avoid the regions of highest activity. The receptor group exhibits an extensive operational range and is able to mitigate loss or restricted access to fishing grounds through its spatial tolerance. However, the vessels have a limited ability to deploy alternative gear.
- 13.11.2.9 Scallop dredgers are deemed to have moderate spatial tolerance due to the ability to fish numerous fishing grounds. The sensitivity of the receptor is, therefore, considered to be **Low**.

#### *Otter Trawls*

- 13.11.2.10 This receptor group comprises larger vessels (>12 m) that target species through deploying otter trawls. This commercial fishing method is the most commercially lucrative within the Study Area, accounting for 70% of the catch value, being most active in the latter half of the year, from June onwards and peaking in August, September and October. Data identified that these vessels have been observed within various areas of the commercial fisheries Study Area and are active within the Offshore Development Area, overlapping the Offshore ECC and OAA. The receptor group exhibits an extensive operational range and is able to mitigate loss or restricted access to fishing grounds through its spatial tolerance.
- 13.11.2.11 The otter trawls receptor group is not particularly vulnerable to impacts that may arise from the Salamander Project and has moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas. This receptor has moderate spatial tolerance due to the ability to fish numerous fishing grounds. The sensitivity of the receptor is, therefore, considered to be **Low**.

#### *Pelagic Trawls*

- 13.11.2.12 This receptor group comprises larger vessels (>12 m) that target species through deploying pelagic trawls. Within the commercial fisheries Study Area, this fishery almost exclusively operates out of ICES Rectangles 44E8 and 43E9. Although this receptor is generally restricted to ICES Rectangles further offshore, there was overlap between this receptor and the Offshore ECC in 2018. The receptor group exhibits an extensive operational range and possesses an ability to target other pelagic species through deployment of alternative gear. This is likely to mitigate loss or restricted access to fishing grounds.
- 13.11.2.13 Whilst the pelagic trawls receptor is not particularly vulnerable to impacts that may arise from the Salamander Project, it has an extensive operational range and high method versatility. The sensitivity of the receptor is, therefore, considered to be **Negligible**.

### Magnitude of Impact

#### *Potters*

- 13.11.2.14 Potters are active within the commercial fisheries Study Area, including the area where the Offshore ECC is located. Feedback, via consultation with fisheries stakeholders and analysis of baseline datasets, indicate that this receptor group predominantly constitutes Scottish vessels.
- 13.11.2.15 Limited spatial activity data is available for this receptor group; however, data indicates high potting intensity overlapping the Offshore ECC, with no activity observed within the OAA.
- 13.11.2.16 This receptor group will be affected by construction works within the Offshore ECC, with entire construction phase having an anticipated duration of up to 18 months. However, the majority of this will involve works not associated with the Offshore ECC but the OAA. Therefore, actual disruption via construction activity will be more limited.
- 13.11.2.17 The exclusion of all fishing activity during construction within the Offshore Development Area, may temporarily impact a regional spatial extent and affect a relatively low proportion of this receptor's annual landings. That said, some studies suggest there may be potential benefits to lobster fisheries from temporary closures of selected areas during construction (Roach *et al.*, 2018).
- 13.11.2.18 It is noted, however, that vessels within this receptor group would likely be required to temporarily remove their gear from areas where installation works were being undertaken, and either relocate to other areas offshore or bring to shore, depending on available grounds and fishing preferences.
- 13.11.2.19 The limited area and period of exclusion is assessed as resulting in a loss of between 5-10% of the annual value of landings, for vessels within this receptor group.
- 13.11.2.20 In light of the above, the impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months), intermittent, and with high reversibility due to the temporary nature of the works. It is predicted that the impact will affect the receptor directly, but be of Low magnitude, as it is judged construction would only affect an area from which a minor proportion of the receptor group's commercial annual value of landings is caught. The magnitude of impact is, therefore, considered to be **Low**.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.11.2.21 This receptor group will not be affected by a loss of grounds or restricted access to the Offshore Development Area beyond 12 nm during the construction phase, due to the distance offshore (i.e. these vessels do not fish in this area). Feedback, via consultation with fisheries stakeholders and analyses of official datasets, indicate that this receptor group predominantly constitutes Scottish vessels.
- 13.11.2.22 This receptor group will be affected by construction works within the 12 nm region of the Offshore Development Area, with the entire construction phase having an anticipated duration of up to 18 months.
- 13.11.2.23 The exclusion of all fishing activity during construction within the Offshore Development Area will be temporary, will impact a small spatial extent and affect a relatively low proportion of this receptor's annual landings, with alternate fishing grounds available.
- 13.11.2.24 The limited area and period of exclusion is assessed as resulting in a loss of <5% of the annual value of landings, for vessels within this receptor group.
- 13.11.2.25 In light of the above, the impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months), intermittent, and with high reversibility due to the temporary nature of the works.

In order to maintain a precautionary approach, it is predicted that the impact will affect the receptor directly but be of low magnitude, as it is judged that the construction duration (which corresponds with low) would only affect an area from which a minor proportion (<5%) of the receptor group's commercial annual value of landings is caught (corresponding with negligible). The magnitude of impact is, therefore, considered to be **Low**.

#### *Scallop Dredgers*

- 13.11.2.26 Scallop dredgers are active within the commercial fisheries Study Area, including the area where the Offshore ECC is located. Feedback, via consultation with fisheries stakeholders and analyses of official datasets, indicate that this receptor group predominantly constitutes vessels from the Scotland, plus a small number of English registered vessels.
- 13.11.2.27 This receptor group will be affected by construction works within the Offshore ECC, with the entire construction phase having an anticipated duration of up to 18 months. However, the majority of this will involve works not associated with the Offshore ECC but the OAA. Therefore, actual disruption via construction activity will be more limited.
- 13.11.2.28 The exclusion of all fishing activity during construction within the Offshore Development Area will be temporary, will impact a small regional spatial extent and a relatively low proportion of this receptor's annual landings, with alternative fishing grounds available.
- 13.11.2.29 The limited area and period of exclusion is assessed as resulting in a loss of between 5-10% of the annual value of landings, for vessels within this receptor group.
- 13.11.2.30 In light of the above, the impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months), intermittent, and with high reversibility due to the temporary nature of the works. It is predicted that the impact will affect the receptor directly, but be of low magnitude, as it is judged construction would only affect an area from which a minor proportion of the receptor group's commercial annual value of landings is caught. The magnitude of impact is, therefore, considered to be **Low**.

#### *Otter Trawls*

- 13.11.2.31 Otter trawls are active within the commercial fisheries Study Area, including the area where the Offshore Development Area is located. Feedback, via consultation with fisheries stakeholders and analyses of official datasets, indicate that this receptor group predominantly constitutes vessels from the Scotland, plus a small number of English registered vessels.
- 13.11.2.32 This receptor group will be affected by construction works at the Offshore Development Area, with entire construction phase has an anticipated duration of up to 18 months.
- 13.11.2.33 The limited area and period of exclusion is assessed as resulting in a loss of between 5-10% of the annual value of landings, for vessels within this receptor group.
- 13.11.2.34 Due to the exclusion of all fishing activity during construction within the Offshore Development Area, temporarily impacting a regional spatial extent and affecting a relatively low proportion of this receptor's annual landings.
- 13.11.2.35 In light of the above, the impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months), intermittent, and with high reversibility due to the temporary nature of the works. It is predicted that the impact will affect the receptor directly, but be of low magnitude, as it is judged



construction would only affect an area from which a minor proportion of the receptor group’s commercial annual value of landings is caught. The magnitude of impact is, therefore, considered to be **Low**.

*Pelagic Trawls*

- 13.11.2.36 Pelagic trawls are active within the commercial fisheries Study Area, including the area where the Offshore ECC is located. Feedback, via consultation with fisheries stakeholders and analyses of official datasets, indicate that this receptor group predominantly constitutes vessels from the Scotland, plus a small number of English registered vessels.
- 13.11.2.37 This receptor group will be affected by construction works within the Offshore ECC, with entire construction phase has an anticipated duration of up to 18 months.
- 13.11.2.38 The limited area and period of exclusion is assessed as resulting in a loss of <5% of the annual value of landings, for vessels within this receptor group.
- 13.11.2.39 Due to the exclusion of all fishing activity during construction within the Offshore Development Area, temporarily impacting a regional spatial extent and affecting a relatively low proportion of this receptor’s annual landings.
- 13.11.2.40 In light of the above, the impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months), intermittent, and with high reversibility due to the temporary nature of the works. In order to maintain a precautionary approach, it is predicted that the impact will affect the receptor directly but be of low magnitude, as it is judged that the construction duration (which corresponds with low) would only affect an area from which a minor proportion (<5%) of the receptor group’s commercial annual value of landings is caught (corresponding with negligible). The magnitude of impact is, therefore, considered to be **Low**.

Significance of the Effect

- 13.11.2.41 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.12**. As such, loss or restricted access to fishing grounds from construction activities is considered **Not Significant** in EIA terms for all receptor groups.

**Table 13.12 Sensitivity, magnitude and impact significance relating to loss or restricted access to fishing grounds during construction of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Low	Minor
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Low	Low	Negligible
Otter trawls	Low	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

### Displacement of Fishing Activity into Other Areas

- 13.11.2.42 The construction phase of the Offshore Development may lead to displacement of fishing activity into other areas, as a result of loss or restricted access to fishing grounds. This displacement could create potential adverse effects on existing fisheries in the areas that vessels are displaced into, via increased gear conflict and/or reduction in landings.

#### Sensitivity of Receptor

- 13.11.2.43 The sensitivity of all commercial fisheries receptors to potential displacement impacts is judged to be the same as that for the loss and reduced access impact. Full details of receptor group sensitivity are presented in **Sections 13.11.2.4 to 13.11.2.13**; assessment of Loss or Restricted Access to Fishing Grounds during the Construction phase.

#### Magnitude of Impact

##### *Potters*

- 13.11.2.44 The loss of access to fishing grounds within 44E8 during the construction phase, is likely to result in displacement of potting vessels onto adjacent grounds for the duration of the works. Typically, vessels less than 10 m in length deploy static gear and operate across distinct fishing grounds that contain suitable habitat for target species, therefore this receptor is limited to restricted areas. These vessels have limited ability to deploy other gear; alternative target species often caught from vessels <10 m in length, such as mackerel, are seasonal in nature. High densities of potters utilise grounds overlapping and nearby to the Offshore ECC and it is predicted that these vessels will be displaced due to safety zones and construction activities. However, this receptor group will not be affected during construction works within the OAA, due to the distance offshore (beyond 12 nm) (i.e. these vessels do not fish in this area).
- 13.11.2.45 Fishers that operate within the Offshore ECC will have to relocate to areas further away, either to the north within 44E8, or to the south in 43E8, and these areas are less productive than those found within the Offshore ECC. Relocation away from the Offshore ECC is likely to incur increased fuel costs to fishers and an increase in time spent reaching fishing grounds, as well as potential increased fishing time to achieve full catch due to less familiar sites being less productive.
- 13.11.2.46 Construction activities are anticipated to take up to 18 months so this impact is considered temporary. Displacement is therefore deemed to have a low magnitude of impact as it is anticipated that less than 5-10% of receptors annual landings will be impacted. Due to the spatial limitations to grounds suitable for potting and considering the short to medium term duration of impact (i.e. 1 – 4 years), though reversible, the magnitude of impact on this receptor is judged to be **Low**.

##### *Handliners and Fishers Using Gear with Hooks*

- 13.11.2.47 This receptor group will not be affected by displacement impacts from the Offshore Development Area beyond 12 nm during the construction phase, due to the distance offshore (i.e. these vessels do not fish in this area).
- 13.11.2.48 Gear using hooks is exclusively used by vessels less than 10 m in length to catch seasonally abundant mackerel in the autumn. Fishers may be displaced from fishing grounds within the 12 nm region of the Offshore ECC, although both the vessels and the target species are mobile and may depart the Offshore Development Area as neither are spatially limited. The impact would be short to medium term (i.e. 1 – 4

years) though reversible and it is anticipated that <5% of this receptor's annual landings will be impacted. In order to maintain a precautionary approach, it is predicted that the impact will affect the receptor directly but be of low magnitude, as it is judged that the construction duration (which corresponds with low) would only affect an area from which a minor proportion (<5%) of the receptor group's commercial annual value of landings is caught (corresponding with negligible). The magnitude of impact is, therefore, considered to be **Low**.

#### *Scallop Dredges*

- 13.11.2.49 Regions outside the Offshore Development Area present extensive opportunities for scallop dredging that show greater productivity than those found within the Offshore Development Area. With ample opportunity to deploy gear in different areas, any vessels displaced by construction impacts are potentially able to disperse across multiple, highly productive areas. It is anticipated that between 5 and 20% of receptors annual landings will be impacted, so that magnitude of impact will be low. The temporary duration of the impact, and the perceived lack of reliance on these fishing grounds means that the magnitude of impact on scallop dredgers is considered to be **Low**.

#### *Otter Trawls*

- 13.11.2.50 Data identified that this receptor group comprises larger vessels (>12 m) targeting species through otter trawl deployment, being observed within various areas of the commercial fisheries Study Area and are active within the Offshore Development Area. This is the most commercially lucrative fishing method within the Study Area, accounting for 64% of the catch value, being highly active in the latter half of the year. Exhibiting an extensive operational range, this receptor group is able to manage displacement of fishing activity into other areas through spatial tolerance. Due to these factors and the predicted short duration ( $\leq 18$  months), the magnitude of impacts is assessed to be **Low**.

#### *Pelagic Trawls*

- 13.11.2.51 Catches from pelagic trawls vary across the Study Area, with a distinct focus on the eastern ICES Rectangles further offshore, particularly 43E9. Within the narrower focus of 44E8, pelagic catches from UK vessels are low, and it is considered that interactions between the pelagic trawls and construction activities will be limited.
- 13.11.2.52 Many of the non-UK vessels that fish within the Study Area utilise pelagic trawls. The magnitude of impact from the Salamander Project on this receptor is anticipated to be low as ICES Rectangles further offshore are preferred. Landings and effort of these vessels within 44E8 is minimal.
- 13.11.2.53 This impact would be short to medium term (i.e. 1 – 4 years) though reversible and it is anticipated that <5% of this receptor's annual value of landings will be impacted. In order to maintain a precautionary approach, it is predicted that the impact will affect the receptor directly but be of low magnitude, as it is judged that the construction duration (which corresponds with low) would only affect an area from which a minor proportion (<5%) of the receptor group's commercial annual value of landings is caught (corresponding with negligible). The magnitude of impact is, therefore, considered to be **Low**.

#### Significance of the Effect

- 13.11.2.54 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.13**. As such, displacement of fishing activity into other areas from construction activities is considered **Not Significant** in EIA terms for all receptor groups.

**Table 13.13 Sensitivity, magnitude and impact significance relating to displacement of fishing activity into other areas during construction of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Low	Minor
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Low	Low	Negligible
Otter trawls	Low	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

### Safety Considerations for Fishing Vessels

13.11.2.55 This impact assessment focusses on the safety (and potential commercial) issues that may arise by fishing activity within the Offshore Development Area during the construction phase, i.e. via snagging or entanglement of fishing gear on project infrastructure. The assessment of potential risks to fishing vessels in transit is assessed in **Volume ER.A.3, Chapter 14: Shipping and Navigation** (as is potential snagging resulting from presence of vessel anchors).

#### Sensitivity of Receptor

##### *Potters*

13.11.2.56 The nature of static gear fishing, where gear is not towed and does not penetrate the seabed, means that this receptor group is not particularly vulnerable to this specific impact that may arise from the Salamander Project. It is acknowledged, however, that snagging still poses a risk to static gear vessels, for example when hauling gear. The sensitivity of the receptor is therefore, considered to be **Low**.

##### *Handliners and Fishers Using Gear with Hooks*

13.11.2.57 The nature of this fishing type, where gear is not towed and does not penetrate the seabed, means that this receptor group is not particularly vulnerable to this specific impact that may arise from the Salamander Project. Additionally, this receptor group has not been highlighted to fish beyond the 12 nm limit within the Offshore Development. It is acknowledged, however, that snagging still poses a risk to handlining vessels, for example when retrieving lines and this receptor may be present within the 12 nm region of the Offshore ECC. The sensitivity of the receptor is therefore, considered to be **Low**.

##### *Scallop Dredgers*

13.11.2.58 The nature of the gear deployed by this receptor group (needing to tow dredges/nets under significant power whilst penetrating the seabed), means that they are highly vulnerable to this specific impact that may arise from the Salamander Project. The sensitivity of the receptor is, therefore, considered to be **High**.

### *Otter Trawls*

13.11.2.59 The nature of the gear deployed by this receptor group (needing to tow trawls under significant power whilst penetrating the seabed), means that they are highly vulnerable to this specific impact that may arise from the Salamander Project. The sensitivity of the receptor is, therefore, considered to be **High**.

### *Pelagic Trawls*

13.11.2.60 The nature of the gear deployed by this receptor group (needing to tow trawls within the water column) under significant power (but not penetrating the seabed), means that they are vulnerable to this specific impact that may arise from the Salamander Project. The sensitivity of the receptor is, therefore, considered to be **Medium**.

### Magnitude of Impact

13.11.2.61 The magnitude of impact on all commercial fisheries receptor groups is judged as **No Change** as during the construction phase, it is judged that potential impacts related to gear snagging on seabed obstructions will arise due to all fishing activity being excluded from the Offshore Development Area for the duration of works. The Salamander Project has committed to utilise Guard vessel(s), as required by risk assessment (see **Table 13.7**). It is considered that this measure will be sufficient to ensure compliance with the proposed exclusion and provides certainty that the associated risk will be as assessed within this chapter.

### Significance of the Effect

13.11.2.62 A summary of the sensitivity of receptors, impact magnitude and overall effect on significance is provided in **Table 13.14**. As such, loss or damage to gear due to snagging or entanglement during the construction phase is considered **Not Significant** in EIA terms for all receptor groups.

**Table 13.14 Sensitivity, magnitude and impact significance relating to safety considerations to fishing vessels (via snagging or entanglement with offshore and floating infrastructure) during construction of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Low	No change	Negligible
Handline and fishers using gear with hooks	Low	No change	Negligible
Scallop dredgers	High	No change	Negligible
Otter trawls	High	No change	Negligible
Pelagic trawls	Medium	No change	Negligible

## Interference with Fishing Activity as a Result of Increased Vessel Traffic

### Sensitivity of Receptor

- 13.11.2.63 The construction phase of the Offshore Development may lead to interference with fishing activity as a result of increased vessel traffic associated with the construction activities and/or re-direction of existing commercial shipping into the same areas that fishing vessels may have been displaced to.

#### *Potters*

- 13.11.2.64 Potters are deemed to have limited spatial adaptability due to the extent of their operational range and/or limited ability to deploy an alternative gear type. They also have limited spatial tolerance due to dependence on a limited number of fishing grounds. The sensitivity of the receptor is, therefore, considered to be **Medium**.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.11.2.65 Handliners and fishers using gear with hooks are deemed to have moderate spatial adaptability due to extensive operational range and/or moderate ability to deploy an alternative gear type. This receptor also has moderate spatial tolerance due to the ability to fish numerous fishing grounds. The sensitivity of the receptor is, therefore, considered to be **Low**.

#### *Scallop Dredgers*

- 13.11.2.66 Construction vessels in transit would be fully compliant with COLREGs, so would not pose a risk to towed fishing gear or require fishing vessels engaged in fishing to alter their course. Therefore, this receptor group is judged to be not vulnerable to this impact that may arise from the Salamander Project and/or has high recoverability, resulting in a **Negligible** sensitivity.

#### *Otter Trawls*

- 13.11.2.67 Construction vessels in transit would be fully compliant with COLREGs, so would not pose a risk to towed fishing gear or require fishing vessels engaged in fishing to alter their course. Therefore, this receptor group is judged to be not vulnerable to this impact that may arise from the Salamander Project and/or has high recoverability, resulting in a **Negligible** sensitivity.

#### *Pelagic Trawls*

- 13.11.2.68 Construction vessels in transit would be fully compliant with COLREGs, so would not pose a risk to towed fishing gear or require fishing vessels engaged in fishing to alter their course. Therefore, this receptor group is judged to be not vulnerable to this impact that may arise from the Salamander Project and/or has high recoverability, resulting in a **Negligible** sensitivity.

### Magnitude of Impact

- 13.11.2.69 Interference with fishing activity as a result of increased vessel traffic during the construction phase of the Offshore Development is expected to occur for the entire 18-month duration of the works. Therefore, based on the definitions of impact magnitude presented in **Table 13.10**, a **Low** magnitude of impact is predicted for all receptor groups.

### Significance of Effect

- 13.11.2.70 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.15**. As such, interference with fishing activity as a result of increased vessel traffic from construction activities is considered **Not Significant** in EIA terms for all receptor groups.

**Table 13.15 Sensitivity, magnitude and impact significance relating to interference with fishing activity as a result of increased vessel traffic during the construction phase of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Low	Minor
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Negligible	Low	Negligible
Otter trawls	Negligible	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

### **Increased Steaming Times**

#### Sensitivity of Receptor

- 13.11.2.71 The exclusion of fishing vessels from the Offshore Development Area for the duration of the construction phase of the Offshore Development (up to 18 months), may lead to increased steaming times for fishing vessels needing to avoid this area on transit to other fishing areas. This in turn may have an adverse effect on operational costs and ultimately, profit, due to increased fuel costs.
- 13.11.2.72 For all receptor groups other than potters and handliners, their sensitivity to this potential impact is judged to be **Negligible** as they all have an extensive operational range and any diversion around the Offshore Development Area will not represent a significant increase in their overall steaming times.
- 13.11.2.73 For the potters and handliner receptor groups, these are more vulnerable to this impact due to a limited spatial adaptability due to extent of operational range, a limited ability to deploy an alternative gear type and dependence upon a limited number of fishing grounds. Therefore, the sensitivity of these two receptor groups is judged to be **Low**.

#### Magnitude of Impact

- 13.11.2.74 The construction phase of the Offshore Development may lead to increased steaming times, as a result of loss of or restricted access to fishing grounds and displacement into other areas. The impact is of local spatial extent, short to medium term duration (i.e. less than 18 months), and with high reversibility due to the

temporary nature of the works, resulting in minor displacement to a small number of vessels with route deviations that can be safely accommodated.

13.11.2.75 The exclusion of all fishing activity during construction within the Offshore Development Area will be associated with increased steaming times to alternate fishing grounds, potentially increasing the risk to fishing receptors resulting from increased vessel traffic from displacement of fishing vessels from the construction area. Potential effects of increased steaming times may also include increased fuel costs and reduced fishing time.

13.11.2.76 Based on the definition of low magnitude of impact presented in **Table 13.10**, it is predicted that there will be a **Low** magnitude of impact via increased steaming times on all receptor groups.

#### Significance of Effect

13.11.2.77 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.16**. As such, increased steaming times from construction activities is considered **Not Significant** in EIA terms for all receptor groups.

**Table 13.16 Sensitivity, magnitude and impact significance relating to increased steaming times during the construction phase of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Low	Low	Negligible
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Negligible	Low	Negligible
Otter trawls	Negligible	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

#### **Potential Impacts on Commercially Important Fish and Shellfish Resources**

13.11.2.78 The following potential impacts on fish and shellfish ecology as a result of the construction activity of the Offshore Development have been identified:

- Temporary habitat loss/disturbance;
- Underwater sound impacting fish and shellfish receptors;
- Increased Suspended Sediment Concentrations (SSCs) and associated sediment deposition.



13.11.2.79 These potential impacts on fish and shellfish ecology are assessed within **Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology** of the EIAR. The fish and shellfish ecology Study Area covers ICES Statistical Rectangles 43E8, 43E9, 44E7, 44E8, and 44E9.

13.11.2.80 The following species classifications are of commercial importance within the commercial fisheries Study Area and are, therefore, the focus of this assessment:

- Elasmobranchs;
- Demersal fish;
- Pelagic fish;
- Diadromous fish; and
- Shellfish.

13.11.2.81 There is potential for the construction phase to result in adverse effects on commercially important fish and shellfish populations. Some species utilise the commercial fisheries Study Area as spawning and/or nursery grounds or migrate through the commercial fisheries Study Area to reach key habitats further offshore. Adverse effects include behavioural changes or increases/declines in abundance, which could, therefore, potentially affect the commercial fisheries which target those species.

13.11.2.82 The fish and shellfish ecology assessment concluded that none of the impacts on commercially important fish and shellfish populations are considered to result in significant adverse effects. Therefore, no significant impact is predicted for any commercial fisheries receptor groups as a result of impacts on commercially important fish and shellfish resources, i.e. **Not Significant** in EIA terms.

#### **Supply Chain Opportunities for Local Fishing Vessels**

13.11.2.83 During the construction phase (up to 18 months duration) of the Offshore Development, the following are areas of potential support that could be provided by local commercial fishing operators:

- Guard vessels;
- Provision of fishing vessels for visual checks of project infrastructure;
- Scouting surveys; and
- OFLO duties.

13.11.2.84 The construction phase for the Offshore Development has an anticipated duration of up to 18 months, which includes the installation of wind turbine generators and floating substructures, moorings and anchors, as well as inter-array and export cables.

#### Sensitivity of Receptor

13.11.2.85 For this impact, the sensitivity has been defined by the likely potential that the receptor group has for providing support to the Salamander Project, through activities or events that may be beneficial to the environment and either be a permanent or temporary impact above the established baseline.

#### *Potters*

13.11.2.86 Potting vessels are unlikely to be able to provide marine operational support during the construction phase, due to the size and type of vessel (i.e. they are unlikely to have the necessary certifications to allow them to

provide non-commercial fishing support). The sensitivity for this receptor group is therefore considered to be **Negligible**.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.11.2.87 Vessels that fish using handlines and gear with hooks are unlikely to be able to provide marine operational support during the construction phase, due to the size and type of vessel (i.e. they are unlikely to have the necessary certifications to allow them to provide non-commercial fishing support). The sensitivity for this receptor group is therefore considered to be **Negligible**.

#### *Scallop Dredgers*

- 13.11.2.88 These vessels have moderate suitability to provide marine operational support during the construction phase; this is based on the vessel type and size, which means they have the capacity to provide support; in addition to the assumption that vessels have the relevant workboat certifications for the vessel and crew. The sensitivity of the receptor is, therefore, considered to be **Medium**.

#### *Otter Trawls*

- 13.11.2.89 These vessels have moderate suitability to provide marine operational support during the construction phase, this is based on the vessel type and size, in addition to the assumption that vessels have the relevant workboat certifications for the vessel and crew. The sensitivity of the receptor is therefore considered to be **Medium**.

#### *Pelagic Trawls*

- 13.11.2.90 These vessels have moderate suitability to provide marine operational support during the construction phase, this is based on the vessel type and size, in addition to the assumption that vessels have the relevant workboat certifications for the vessel and crew. The sensitivity of the receptor is therefore considered to be **Medium**.

#### Magnitude of Impact

- 13.11.2.91 Due to this potential impact being beneficial, the definition for magnitude used aligns with that outlined in **Volume ER.A.2, Chapter 6: EIA Methodology**, whereby an impact considered to result in a change to the baseline due to an activity or event related to the Salamander Project may be beneficial on the environment and be either temporary or permanent.

#### *Potters*

- 13.11.2.92 Due to the relatively limited size and nature of the vessels that fall within this receptor group, it is unlikely that any notable opportunities would exist for providing supply chain support to the Salamander Project. This is due to the fact that many of the supply chain opportunities listed above may require larger, more equipped vessels, with the ability to stay at sea for a longer period than these smaller vessels are able.
- 13.11.2.93 The exception to this is potentially undertaking scouting surveys in the inshore section of the Offshore Development Area, ahead of any future installation works, to identify the locations of static gear with a view to getting this temporarily removed ahead of any major installation works.
- 13.11.2.94 Even if this impact was to arise, the benefit would be relatively limited in terms of a source of revenue for this receptor group. Therefore, the impact is predicted to be of local spatial extent, short to medium term

duration and intermittent. It is predicted that the impact will affect the receptor directly, but only be of negligible benefit as it is judged that any such support by this receptor group would create a value equivalent to <5% of the receptor group's annual value of landings. The magnitude of impact is, therefore, considered to be **Negligible**.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.11.2.95 Due to the relatively limited size and nature of the vessels that fall within this receptor group, it is unlikely that any notable opportunities would exist for providing supply chain support to the Salamander Project. This is due to the fact that many of the supply chain opportunities listed above may require larger, better equipped vessels, with the ability to stay at sea for a longer period than these smaller vessels are able.
- 13.11.2.96 The exception to this is potentially undertaking scouting surveys in the inshore section of the Offshore Development Area, ahead of any future installation works, to identify the locations of static gear with a view to getting this temporarily removed ahead of any major installation works.
- 13.11.2.97 Even if this impact was to arise, the benefit would be relatively limited in terms of a source of revenue for this receptor group.
- 13.11.2.98 The impact is predicted to be of local spatial extent, short to medium term duration and intermittent. It is predicted that the impact will affect the receptor directly, but only be of negligible benefit as it is judged that any such support by this receptor group would create a value equivalent to <5% of the receptor group's annual value of landings. The magnitude of impact is, therefore, considered to be **Negligible**.

#### *Scallop Dredgers*

- 13.11.2.99 This impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months) and intermittent. It is predicted that the impact will affect the receptor directly, but only be of minor benefit, as it is judged that any such support by this receptor group would create a value equivalent to between 5-10% of the receptor group's annual value of landings. The magnitude of impact is, therefore, considered to be **Low (beneficial)**.

#### *Otter Trawls*

- 13.11.2.100 This impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months) and intermittent. It is predicted that the impact will affect the receptor directly, but only be of minor benefit, as it is judged that any such support by this receptor group would create a value equivalent to between 5-10% of the receptor group's annual value of landings. The magnitude of impact is, therefore, considered to be **Low (beneficial)**.

#### *Pelagic Trawls*

- 13.11.2.101 This impact is predicted to be of local spatial extent, short to medium term duration (i.e. less than 18 months) and intermittent. It is predicted that the impact will affect the receptor directly, but only be of minor benefit, as it is judged that any such support by this receptor group would create a value equivalent to between 5-10% of the receptor group's annual value of landings. The magnitude of impact is, therefore, considered to be **Low (beneficial)**.

### Significance of Effect

13.11.2.102 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.17**. As such, supply chain opportunities for local fishing vessels from construction activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.17 Sensitivity, magnitude and impact significance relating to supply chain opportunities for local fishing vessels during construction of the Offshore Development**

Receptor Group	Sensitivity	Magnitude (beneficial)	Significance
Potters	Negligible	Negligible	Negligible
Handline and fishers using gear with hooks	Negligible	Negligible	Negligible
Scallop dredgers	Medium	Low (beneficial)	Minor Beneficial
Otter trawls	Medium	Low (beneficial)	Minor Beneficial
Pelagic trawls	Medium	Low (beneficial)	Minor Beneficial

### 13.11.3 Operation and Maintenance

#### 13.11.3.1 Impacts assessed:

- Loss or restricted access to fishing grounds;
- Displacement of fishing activity into other areas;
- Interference with fishing activity as a result of increased vessel traffic;
- Increased steaming times;
- Safety considerations for fishing vessels (risks via in transit assessed in **Volume ER.A.3, Chapter 14: Shipping and Navigation** of the EIAR; risks via active fishing, i.e. entanglement, assessed in this Chapter);
- Potential impacts on commercially important fish and shellfish resources; and
- Supply chain opportunities for local fishing vessels.

#### **Loss or Restricted Access to Fishing Grounds**

13.11.3.2 During the operation and maintenance phase of the Offshore Development, commercial fishing activity may be affected via long-term loss or restricted access to fishing grounds, and the associated reduction in revenue. This impact is dependent on the location of the receptor's fishing grounds, the spatial extent of potential fishing grounds lost and the type of fishery, i.e. which gear is deployed.

### Sensitivity of Receptor

- 13.11.3.3 Full details of receptor group sensitivity are presented in **Sections 13.11.2.4 to 13.11.2.13**; assessment of Loss or Restricted Access to Fishing Grounds during the Construction phase.

### Magnitude of Impact

#### *Potters*

- 13.11.3.4 This receptor group will not be affected by a loss of grounds or restricted access to the Offshore Development Area beyond 12 nm during the operation and maintenance phase, due to the distance offshore (i.e. these vessels do not fish in this area). The only permanent infrastructure within the inshore region will be the offshore export cables, which will be fully buried or have external cable protection and will, therefore, not prevent this receptor group from continuing to fish.
- 13.11.3.5 The only exception to this is if any cable repair/remediation events or surveys are required in the operation and maintenance phase in the inshore region where this receptor group is active. This would lead to some temporary, spatially limited impacts where vessels would be requested to avoid such areas for the short-term duration of any such works.
- 13.11.3.6 In consideration of the above, the impact (via cable repair/remediation events or surveys), is predicted to be of local spatial extent, short term duration, intermittent, and with high reversibility. It is predicted that the impact will affect the receptor directly, but be of negligible magnitude, as it is judged such operation and maintenance activities would only affect an area from which a very small proportion (<5%) of the receptor group's annual value of landings is caught. The magnitude of impact is, therefore, considered to be **Negligible**.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.11.3.7 This receptor group will not be affected by a loss of grounds or restricted access to the Offshore ECC beyond 12 nm during the operation and maintenance phase, due to the distance offshore (i.e. these vessels do not fish in this area). The only permanent infrastructure within the inshore region will be the offshore export cables, which will be fully buried or have external cable protection and will, therefore, not prevent this receptor from continuing to fish. The only exception to this is if any cable repair/remediation events or surveys are required in the operation and maintenance phase in the inshore region. This would lead to some temporary, spatially limited impacts where vessels would be requested to avoid such areas for the short-term duration of the works.
- 13.11.3.8 In consideration of the above, the impact (via cable repair/remediation events or surveys), is predicted to be of local spatial extent, short term duration, intermittent, and with high reversibility. It is predicted that the impact will affect the receptor directly, but be of negligible magnitude, as it is judged such operation and maintenance activities would only affect an area from which a very small proportion (<5%) of the receptor group's annual value of landings is caught. The magnitude of impact is, therefore, considered to be **Negligible**.

#### *Scallop Dredgers*

- 13.11.3.9 Even though this receptor group contains vessels of a size that could work outside 12 nm, i.e. within the OAA, the review of baseline data indicated that scallop dredging does not occur within this area. Therefore,

there will be no loss or restricted access to existing scallop fishing grounds within the OAA as a result of permanent Project infrastructure.

- 13.11.3.10 This receptor group will temporarily lose access to discrete areas as a result of infrastructure maintenance works conducted within the Offshore ECC, i.e. cable repair and/or remediation or surveys. However, noting that any such impact will be of local spatial extent, short-term in duration, intermittent and with high reversibility, it is assumed that any impact will be of **Negligible** magnitude to this receptor group. This is on the basis of <5% of annual landings/landing value being affected by such temporary works within the Offshore ECC.

#### *Otter Trawls*

- 13.11.3.11 This receptor group is currently recorded as fishing within the proposed OAA. The presence of permanent Project infrastructure including floating substructures and mooring lines and inter-array cables, located both within the water column and on the seabed, will mean the majority of this area will not be able to be fished safely by this receptor group. This has been confirmed via consultation with commercial fisheries stakeholders currently active in this region.
- 13.11.3.12 The offshore export cables, which will be fully buried or have external cable protection, will not prevent this receptor from continuing to fish with the exception of specific repairs or surveys during the operation and maintenance phase. This would lead to some temporary, spatially limited impacts where vessels would be requested to avoid such areas for the short-term duration of the works.
- 13.11.3.13 Under a realistic worst-case scenario this receptor would be subject to a complete loss of access of the OAA (33.25 km<sup>2</sup>) for the duration of the operational and maintenance phase (35 years), resulting in long-term impacts. However, based on review of landings data and consultation, it is considered that the area within which access will be lost represents only a small proportion (5 – 10%) of the annual value of landings caught and/or landed by this receptor group. This is based on the observation from official activity data that otter trawling takes place across the wider region and is not particularly focused around the OAA. As only a small proportion of the annual value of this receptor group will be impacted over long timescales, the magnitude of impact is considered to be **Low**.

#### *Pelagic Trawls*

- 13.11.3.14 Even though this receptor group contains vessels of a size that could work outside 12 nm, i.e. within the OAA, the review of baseline data indicated that pelagic trawling does not occur within this area. Therefore, there will be no loss or restricted access to existing fishing grounds within the OAA as a result of permanent Project infrastructure.
- 13.11.3.15 This receptor group will lose access to discrete areas as a result of infrastructure maintenance works conducted within the Offshore ECC, i.e. cable repair and/or remediation or surveys. However, noting that any such impact will be of local spatial extent, short-term in duration, intermittent and with high reversibility, it is assumed that any impact will be of **Negligible** magnitude to this receptor group. This is on the basis of <5% of annual landings/landing value being affected by such temporary works within the Offshore ECC.

#### Significance of Effect

- 13.11.3.16 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.18**. As such, loss or restricted access to fishing grounds from operation and maintenance activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.18 Sensitivity, magnitude and impact significance relating to loss or restricted access to fishing grounds during the operation and maintenance phase of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Negligible	Negligible
Handline and fishers using gear with hooks	Low	Negligible	Negligible
Scallop dredgers	Low	Negligible	Negligible
Otter trawls	Low	Low	Negligible
Pelagic trawls	Negligible	Negligible	Negligible

### Displacement of Fishing Activity into Other Areas

- 13.11.3.17 The operation and maintenance phase of the Offshore Development may lead to displacement of fishing activity into other areas, as a result of loss or restricted access to fishing grounds. This displacement could create potential adverse downstream effects on existing fisheries in the areas that vessels are displaced into.

#### Sensitivity of Receptors

- 13.11.3.18 The impact of displacement could restrict fishing opportunities due to displacement increasing vessel density constricting fishing grounds and as such, the sensitivity of the receptor groups to is considered to be in line with that as determined for loss or restricted access to fishing grounds during the construction phase, Full details of receptor group sensitivity are presented in **Sections 13.11.2.4 to 13.11.2.13**; assessment of Loss or Restricted Access to Fishing Grounds during the Construction phase.

#### Magnitude of Impact

##### *Potters*

- 13.11.3.19 For the majority of the up to 35 years operational and maintenance phase, there will be no limitation or restriction on potting activities from the Offshore Development. The only impact pathway for displacement of potting vessels from the Offshore ECC will be when cable repair/remediation works are required in this area, of which up to 6 such events have been assumed to occur within the Offshore ECC over the operational and maintenance phase.
- 13.11.3.20 Any such cable repair/remediation work will be temporary, of limited duration and intermittent in nature. The impact would also affect an area from which only a very small proportion (<5%) of this receptor group's annual value of landings is caught. Therefore, the magnitude of impact is considered to be **Negligible**.

### *Handliners and Fishers Using Gear with Hooks*

- 13.11.3.21 During the operation and maintenance phase, handliners and fishers using gear with hooks are not expected to experience any restriction or limitation to fishing activities, aside from cable repair/remediation activities. It is assessed that impacts from the operation and maintenance represent <5% of the annual value of landings for vessels in this receptor group.
- 13.11.3.22 As mobile fisheries have been assumed to be displaced from the OAA, this introduces potential for a positive effect on handliners and gear using hooks as the OAA may act as a refuge for other fish species, such as mackerel. This may potentially enhance fish stocks and the productivity of this specific fishery. However, it should be noted that the spatial extent of any de facto exclusion area will be small, limiting the potential for such beneficial effects. Impact magnitude during this phase is considered to be **Low (beneficial)**.

### *Scallop Dredgers*

- 13.11.3.23 Review of baseline data indicated that scallop dredging does not occur within the OAA. The site location has also been refined to avoid high intensity fishing areas based on data provided by the SFF. Therefore, there is no potential for interactions with the mooring lines or dynamic inter-array cables of the Offshore Array. As such, it is considered there will be no loss or restricted access to existing scallop fishing grounds within the OAA as a result of permanent Project infrastructure.
- 13.11.3.24 As noted within **Table 13.7**, and discussed in more detail within **Volume ER.A.2, Chapter 3: Site Selection and Consideration of Alternatives**, the OAA was selected specifically to avoid high intensity fishing areas.
- 13.11.3.25 Scallop dredgers may still be present within the Offshore ECC. Aside from during cable repair/remediation activities, higher intensity scallop dredging within the Offshore ECC is not expected to be impacted and displaced during operation if the cables are buried below the gear penetration depth of 30 cm, as confirmed by embedded mitigation. It is assessed that impacts from the operation and maintenance phase represent <5% of the annual value of landings for vessels in this receptor group.
- 13.11.3.26 Maintenance and repair of cables may lead to disruption via safety zones, however this will be temporary and of short duration. Therefore, the magnitude of impact is deemed to be **Low**.

### *Otter Trawls*

- 13.11.3.27 Otter Trawls make a sizeable contribution to landings within the Study Area, and more specifically within 44E8. This receptor group will be unable to resume fishing activities during the operation and maintenance phase within the OAA due to presence of floating platforms and mooring lines. This is supported by consultation feedback which indicates this receptor group expects to avoid fishing within the OAA (33.25 km<sup>2</sup>) during the operation and maintenance phase. As noted within **Table 13.7**, and discussed in more detail within **Chapter 3: Site Selection and Consideration of Alternatives**, the OAA was selected specifically to avoid high intensity fishing areas. This was based on data provided by the SFF, therefore, if displacement occurs, the Offshore ECC represents an area of lower productivity for this receptor and is only a fraction of available fishing grounds within the Study Area, so displaced vessels are perceived as being able to refocus fishing efforts on other fishing grounds nearby.
- 13.11.3.28 Trawling across the Offshore ECC (47.4 km<sup>2</sup>) is expected to resume following construction if cable burial to below the gear penetration depth is successful or where unsuccessful, overtrawlable rock protection is laid. Displacement may occur infrequently due to cable maintenance or repair/replacement activities, although



these are anticipated to be temporary and of short duration. Therefore, the magnitude of impact is deemed to be **Low**.

#### *Pelagic Trawls*

- 13.11.3.29 Consultation feedback indicates this receptor group will avoid fishing within the OAA during the operation and maintenance phase and as such it is assumed that fishing will not continue due to infrastructure presence. Additionally, as noted within **Table 13.7**, and discussed in more detail within **Chapter 3: Site Selection and Consideration of Alternatives**, data provided by the SFF was used to ensure that the OAA was located in an area that did not overlap high intensity fishing areas. Although pelagic fishery stakeholders have confirmed fishing will not be undertaken within the Offshore Array, historical VMS data show no evidence of targeted effort within the OAA by pelagic trawlers. Accordingly, it is determined there will be no displacement impacts within the OAA. It is assessed that impacts from the operation and maintenance phase represent <5% of the annual value of landings for vessels in this receptor group, with ample opportunity to relocate to other regions when maintenance operations are taking place, which are likely to be temporary and limited in spatial extent. Therefore, the magnitude of impact is deemed to be **Negligible**.
- 13.11.3.30 Landings data show that there are extremely low levels of pelagic fishing activity within a small region of the Offshore ECC. It is determined that the only displacement impacts will occur due to spatially restricted and temporary works within the Offshore ECC where low levels of pelagic fishing activity have been identified. Due to the low levels of fishing activity, and the spatially restricted and temporary nature of any ECC works, any associated displacement would result in a negligible change to pelagic fishing activities. Therefore, the magnitude of impact is deemed to be **Negligible**.

#### Significance of the Effect

- 13.11.3.31 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.19**. As such, displacement of fishing activity into other areas from operation and maintenance activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.19 Sensitivity, magnitude and impact significance relating to displacement of fishing activity into other areas during operation and maintenance of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Negligible	Negligible
Handline and fishers using gear with hooks	Low	Low (beneficial)	Negligible
Scallop dredgers	Low	Low	Negligible
Otter trawls	Low	Low	Negligible
Pelagic trawls	Negligible	Negligible	Negligible

## Safety Considerations for Fishing Vessels

13.11.3.32 This impact assessment focusses on the safety (and potential commercial) issues that may arise by fishing activity within the Offshore Development Area during the operational phase, i.e. via snagging or entanglement of fishing gear on Project infrastructure, including any elements related to cable repair/remediation/protection works that may take place during this phase. The assessment of potential risks to fishing vessels in transit is assessed in **Volume ER.A.3, Chapter 14: Shipping and Navigation** (as is potential snagging resulting from presence of vessel anchors).

### Sensitivity of Receptor

13.11.3.33 The sensitivity of the receptor groups remains the same as described for the construction phase of this impact, as summarised in **Table 13.14**.

### Magnitude of Impact

#### *Potters*

13.11.3.34 During the operational phase of the Salamander Project, fishers using static gear will be able to continue fishing within the OAA or Offshore ECC. Restriction for static gear is only anticipated to apply in the immediate vicinity of infrastructure including floating platforms, mooring lines and dynamic inter-array cables.

13.11.3.35 The OAA is not currently utilised by potters, most likely due to the distance offshore/water depth and/or presence of mobile gear vessels in this area. However, during the operational phase it has been assumed that all mobile gear vessels will cease fishing within the OAA due to the presence of Project infrastructure on or below the water surface. Therefore, there is the potential for larger potting vessels to start to access these grounds due to the reduced risk of damage to their gear by mobile vessels. Consequently, scope exists for loss or damage to potting gear due to snagging or entanglement with offshore and floating infrastructure.

13.11.3.36 Trials of deploying static gear within the Hywind site reported in 2023 (Wright *et al*, 2023), involved the establishment of three 'fishing trial areas' within the wind farm, based on a minimum distance of 200 m to the wind turbines and the dynamic sections of the export/inter-array cables, and 50 m minimum distance to the remaining subsea infrastructure. A control area was designated outside the wind farm area. These four areas were then fished in rotation using all gear types in each rotation within each area.

13.11.3.37 All gear was successfully operated within the designated 'fishing trial areas' in the Hywind floating offshore wind farm and there were no safety issues, gear snagging or fishing gear lost. The fishing trial areas allowed adequate space to operate the vessel and static fishing gear and were deemed to be safe distances away from the turbines for the vessel and fishing gear in this trial.

13.11.3.38 Based on the results of the Hywind trial, *if* larger potting vessels did move into the OAA during the operational phase of the Salamander Project and maintained a safe distance from any infrastructure, the magnitude of impact within the OAA would be **Negligible**.

13.11.3.39 Within the Offshore ECC, impacts associated with snagging or subsea hazards will be mitigated by burial to depths beyond the penetration depths by all fishing gears. Even though the offshore export cable(s) will be buried and/or surface-laid with appropriate external cable protection, potential exists for the offshore export cable(s) to become shallow-buried or exposed due to changes in seabed conditions. In the event that cables become exposed, or some other potential snag risk is identified, temporary safety zones will be

implemented to ensure the potential for snagging is mitigated and all stakeholders will be suitably informed through Notice to Mariners and close consultation with commercial fishers operating in the vicinity of the Salamander Project. The Salamander Project has also committed to utilise Guard vessel(s), as required by risk assessment (see **Table 13.7**). It is considered that this measure will be sufficient to ensure compliance with the proposed exclusion.

- 13.11.3.40 Assuming the successful implementation of all embedded mitigation measures, this impact magnitude within the Offshore ECC is considered **Negligible**.

*Handliners and Fishers Using Gear with Hooks*

- 13.11.3.41 As per static gear, the OAA is currently not fished by handliners/fishers using gear with hooks, again, due to the presence of mobile gear vessels in this area. Assuming the same *potential* scenario as for Potters, whereby this receptor group does commence fishing in the OAA due to the removal of mobile gear activity, then potential exists for snagging in Project infrastructure. Impacts associated with snagging of handliners or gear using hooks is considered a highly unlikely scenario due to the maneuverability of the gear and ease of removal from the water. Therefore, assuming these vessels maintained a safe distance from any infrastructure, the magnitude of impact within the OAA would be **Negligible**.

- 13.11.3.42 In the event that a navigational hazard was identified in the Offshore ECC due to cable exposure or damage, temporary safety zones would prevent the interaction of this receptor with any potential impact. Therefore, the impact magnitude of snagging in the Offshore ECC during the operational phase is also considered **Negligible**.

*Scallop Dredgers*

- 13.11.3.43 It has been assumed that no scallop dredging will take place within the OAA during the operational phase due to the difficulty in deploying mobile gear in this area. Therefore, the impact magnitude will be **No Change** in this area.

- 13.11.3.44 Even though the offshore export cable(s) will be buried and/or surface-laid with appropriate external cable protection, potential exists for the offshore export cable(s) to become shallow-buried or exposed due to changes in seabed conditions. In the event that cables become exposed in the Offshore ECC, temporary safety zones will be implemented to ensure the potential for snagging is mitigated against and relevant stakeholders will be suitably informed through Notice to Mariners and close consultation with commercial fishers operating in the vicinity of the Salamander Project.

- 13.11.3.45 Therefore, the impact magnitude of snagging in the Offshore ECC during the operational phase is considered **Low**.

*Otter Trawls*

- 13.11.3.46 It has been assumed that no otter trawling will take place within the OAA during the operational phase due to the difficulty in deploying mobile gear in this area. Therefore, the impact magnitude will be **No Change** in this area.

- 13.11.3.47 As above, despite embedded mitigation there is potential for otter trawls to interact with offshore export cables in the event that storm displaces sediment and leaves the cables in the Offshore ECC exposed.

However, this is deemed to be extremely unlikely due to regular maintenance and monitoring of the offshore export cables.

13.11.3.48 Even though the offshore export cable(s) will be buried and/or surface-laid with appropriate external cable protection, potential exists for the offshore export cable(s) to become shallow-buried or exposed due to changes in seabed conditions. In the event that cables become exposed in the Offshore ECC, temporary safety zones will be implemented to ensure the potential for snagging is mitigated against and relevant stakeholders will be suitably informed through Notice to Mariners and close consultation with commercial fishers operating in the vicinity of the Salamander Project.

13.11.3.49 Therefore, the impact magnitude of snagging in the Offshore ECC during the operational phase is considered **Low**.

#### *Pelagic Trawls*

13.11.3.50 It has been assumed that no pelagic trawling will take place within the OAA during the operational phase due to the difficulty in deploying mobile gear in this area. Therefore, the impact magnitude will be **No Change** in this area.

13.11.3.51 With respect to the Offshore ECC, vessels deploying pelagic mobile gear into mid water are less likely than vessels deploying gear on or near the seabed to encounter a snagging hazard or obstruction. In the event that cables become exposed in the Offshore ECC, temporary safety zones will also be implemented to ensure the potential for snagging is mitigated against and relevant stakeholders will be suitably informed through Notice to Mariners and close consultation with commercial fishers operating in the vicinity of the Salamander Project.

13.11.3.52 Therefore, the impact magnitude of snagging in the Offshore ECC during the operational phase is considered **Negligible**.

#### Significance of the Effect

13.11.3.53 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.20**. As such, safety considerations to fishing vessels (via snagging or entanglement with offshore and floating infrastructure) is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.20 Sensitivity, magnitude and impact significance relating to safety considerations to fishing vessels (via snagging or entanglement with offshore and floating infrastructure during operation and maintenance of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters (Offshore Array and ECC)	Low	Negligible	Negligible
Handline and fishers using gear with hooks (Offshore Array and ECC)	Low	Negligible	Negligible
Scallop dredgers (Offshore Array)	High	No Change	Negligible
Scallop dredgers (ECC)	High	Low	Minor

Otter trawls (Offshore Array)	High	No Change	Negligible
Otter trawls (ECC)	High	Low	Minor
Pelagic trawls (Offshore Array)	Medium	No Change	Negligible
Pelagic trawls (ECC)	Medium	Negligible	Negligible

### Interference with Fishing Activity as a Result of Increased Vessel Traffic

13.11.3.54 The operation and maintenance phase of the Offshore Development may lead to interference with fishing activity as a result of increased vessel traffic, caused by displacement and loss or restricted access to fishing grounds. This interference could create potential adverse downstream effects on existing fisheries in the areas that vessels are displaced into.

#### Sensitivity of Receptor

13.11.3.55 The impact interference with fishing activity as a result of increased vessel traffic could restrict fishing opportunities due to increased vessel density constricting fishing grounds and as such, the sensitivity of the receptor groups is considered in line with that as determined for interference via increased vessel traffic during the construction phase, as summarised in **Table 13.15**.

#### Magnitude of Impact

13.11.3.56 Slight interference with fishing activity may occur as a result of increased maintenance vessel traffic within the OAA during operational and maintenance phases. Assessment is on the basis that fishing activity will continue within the Offshore Development Area during these operation and maintenance phases. Magnitude is assessed within the context that the OAA represents <5% of the annual value of landings for all receptor groups. As detailed in **Volume ER.A.3, Chapter 14: Shipping and Navigation**, vessels transiting past the site are likely to be displaced from the OAA during the operation and maintenance phase with pre-established vessel route deviations anticipated to remain from the construction phase. Resultant increases in vessels transiting through these surrounding areas are considered to potentially interfere with any fishing activities occurring. There is further potential for increased traffic resulting from smaller vessels that may transit through the OAA during the operational phase, although this would be at the discretion of the individual vessels. It should be noted that consultation feedback indicates otter and pelagic trawlers will avoid fishing within the OAA (33.25 km<sup>2</sup>) during the operation and maintenance phase.

13.11.3.57 Any impact via cable repair/remediation events in both the OAA and Offshore ECC is predicted to be of local spatial extent, short term duration, intermittent, and with high reversibility. It is predicted that the impact will affect the receptors directly, but be of negligible magnitude, as it is judged operation and maintenance would only affect an area from which a very small proportion of the receptor group's commercial annual value of landings is caught.

13.11.3.58 Considering the embedded mitigation measures outlined in **Section 13.8.3**, the magnitude of impact will be **Negligible** for all commercial fisheries receptor groups across the Offshore Development Area.

### Significance of Effect

13.11.3.59 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.21**. As such, interference with fishing activity as a result of increased vessel traffic from operation and maintenance activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.21 Sensitivity, magnitude and impact significance relating to interference with fishing activity as a result of increased vessel traffic during the operation and maintenance phase of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Negligible	Negligible
Handline and fishers using gear with hooks	Low	Negligible	Negligible
Scallop dredgers	Negligible	Negligible	Negligible
Otter trawls	Negligible	Negligible	Negligible
Pelagic trawls	Negligible	Negligible	Negligible

### **Increased Steaming Times**

13.11.3.60 The operation and maintenance phase of the Offshore Development may lead to increased steaming times, caused by displacement and loss or restricted access to fishing grounds. This increase in steaming times could create potential adverse downstream effects on existing fisheries in the areas that vessels are displaced into.

#### Sensitivity of Receptor

13.11.3.61 The impact of increased steaming times could restrict fishing opportunities to potentially less productive fishing grounds and as such, the sensitivity of the receptor groups is considered to be in line with that as determined for increased steaming times during the construction phase. Full details of receptor group sensitivity are summarised in **Table 13.16**; assessment of Increased Steaming Times during the Construction phase.

#### Magnitude of Impact

13.11.3.62 A slight increase in steaming times may occur as a result of physical infrastructure within the OAA. As detailed in **Volume ER.A.3, Chapter 14: Shipping and Navigation**, vessels are likely to be displaced from the OAA during the operation and maintenance phase with pre-established vessel route deviations anticipated to remain from the construction phase. The maximum deviation is 0.8 nm, with an average deviation of 0.3 nm identified within the shipping and navigation assessment. It should be noted that this is not expected to impact all vessels. Smaller vessels may transit through the OAA during the operational phase although this would be at the discretion of the individual vessels; however, consultation feedback indicates otter and pelagic trawlers will avoid fishing within the OAA (33.25 km<sup>2</sup>) during the operation and maintenance phase.

- 13.11.3.63 Impacts via cable repair/remediation events in both the OAA and Offshore ECC are predicted to be of local spatial extent, long term duration, intermittent, and with high reversibility. It is predicted that the impacts of increased fuel cost and potentially reduced fishing time will affect the receptors directly but be of negligible magnitude.
- 13.11.3.64 Considering the embedded mitigation measures outlined in **Section 13.8.3**, the magnitude of impact will still be **Negligible** for all commercial fisheries receptor groups across the Offshore Development Area.

Significance of Effect

- 13.11.3.65 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.22**. As such, increased steaming times from operation and maintenance activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.22 Sensitivity, magnitude and impact significance relating to increased steaming times during the operation and maintenance phase of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Low	Negligible	Negligible
Handline and fishers using gear with hooks	Low	Negligible	Negligible
Scallop dredgers	Negligible	Negligible	Negligible
Otter trawls	Negligible	Negligible	Negligible
Pelagic trawls	Negligible	Negligible	Negligible

**Potential Impacts on Commercially Important Fish and Shellfish Resources**

- 13.11.3.66 There is potential for the operations and maintenance phase to result in adverse and/or beneficial effects on commercially important fish and shellfish populations. Effects include behavioural changes or increases/declines in abundance, which could, therefore, potentially affect the commercial fisheries which target those species.
- 13.11.3.67 A detailed assessment of potential effects of the Offshore Development on fish and shellfish receptors is presented in **Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology**. Overall, the fish and shellfish ecology assessment concluded that the significance of effect during the operational and maintenance phase remains the same or less in comparison to the construction phase for all impacts. Therefore, no significant impact is predicted for any commercial fisheries receptor groups as a result of impacts on commercially important fish and shellfish resources. As such, potential impacts on commercially important fish and shellfish resources from operation and maintenance activities is considered **Not Significant** in EIA terms, for all receptor groups.

### Supply Chain Opportunities for Local Fishing Vessels

13.11.3.68 During the operation and maintenance phase of up to 35 years, there may be opportunities for commercial fishing vessels to provide marine operational support, such as OFLO duties and guard vessel requirements during periods of major maintenance.

#### Sensitivity of Receptor

13.11.3.69 For this impact, the sensitivity has been defined by the likely potential the receptor group has to provide support to the Salamander Project.

13.11.3.70 The sensitivity of the receptor groups remains the same as described for supply chain opportunities during the construction phase, as summarised in **Table 13.17**.

#### Magnitude of Impact

13.11.3.71 Due to this impact being beneficial, the definition for magnitude has been amended to align with the terms for impacts, that are outlined in **Volume ER.A.2, Chapter 6: EIA Methodology**.

13.11.3.72 The smaller potting and handline vessels are unlikely to be able to provide marine operational support, as described for the construction phase. The magnitude is therefore considered to be **Negligible**.

13.11.3.73 The magnitude for all other commercial fisheries receptor groups during the operation and maintenance phase is considered to be lower than during construction, as the supply chain opportunities are likely to be shorter term and more intermittent. It is predicted that the impact will affect the receptors directly, but only be of very minor benefit, as it is judged that any such support by these receptor groups would create a value equivalent to less than 5% of the receptor groups' annual value of landings. The magnitude is therefore considered to be **Negligible**.

#### Significance of Effect

13.11.3.74 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.23**. As such, supply chain opportunities for local fishing vessels from operation and maintenance activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.23 Sensitivity, magnitude and impact significance relating to supply chain opportunities for local fishing vessels during the operation and maintenance phase of the Offshore Development**

Receptor Group	Sensitivity	Magnitude (beneficial)	Significance
Potters	Negligible	Negligible	Negligible
Handline and fishers using gear with hooks	Negligible	Negligible	Negligible
Scallop dredgers	Medium	Negligible	Negligible
Otter trawls	Medium	Negligible	Negligible
Pelagic trawls	Medium	Negligible	Negligible



#### 13.11.4 Decommissioning

13.11.4.1 Impacts associated with the decommissioning phase of the Offshore Development are not expected to exceed those associated with the construction phase, however, with some potential variation depending on the extent of decommissioning proposed undertaken and methods used. For example, if it is determined that assets of the Salamander Project are to be left *in situ*, such as cable protection, there will be a notable reduction in the potential for seabed habitat disturbance. At present, the known details on decommissioning are provided in **Volume ER.A.2, Chapter 4: Project Description**.

13.11.4.2 In line with the Scottish Government's position on the Decommissioning of Offshore Renewable Energy Installations (OREI), at the end of the operational lifetime of the Project, it is anticipated that all structures above the seabed or ground level will be completely removed. However, the approach employed at Decommissioning will take account of changing best practice and new technologies and will be compliant with the legislation and policy requirements at the time of Decommissioning. Any potential differences in impacts associated with decommissioning of the Offshore Development will be assessed once a Decommissioning Programme has been defined prior to the commencement of any project-specific decommissioning works.

13.11.4.3 Impacts assessed:

- Loss or restricted access to fishing grounds;
- Displacement of fishing activity into other areas;
- Interference with fishing activity as a result of increased vessel traffic;
- Increased steaming times;
- Safety considerations for fishing vessels (risks via in transit assessed in **Volume ER.A.3, Chapter 14: Shipping and Navigation** of the EIAR; risks via active fishing, i.e. entanglement, assessed in this Chapter);
- Potential impacts on commercially important fish and shellfish resources; and
- Supply chain opportunities for local fishing vessels.

##### **Loss or Restricted Access to Fishing Grounds**

###### Sensitivity of Receptor

13.11.4.4 The sensitivity of the receptor groups remains the same or similar as described for loss or restricted access to fishing grounds during the construction phase, as summarised in **Table 13.12**.

###### Magnitude of Impact

13.11.4.5 The magnitude of impact for loss or restricted access to fishing grounds during the decommissioning phase is considered to be similar to that of construction, but in reverse. As such, the magnitude of the receptor groups remains the same or less than as described for loss or restricted access to fishing grounds during the construction phase, as summarised in **Table 13.12**.

### Significance of Effect

- 13.11.4.6 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.24**. As such, loss or restricted access to fishing grounds from decommissioning activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.24 Sensitivity, magnitude and impact significance relating to loss or restricted access to fishing grounds during decommissioning of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Low	Minor
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Low	Low	Negligible
Otter trawls	Low	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

### **Displacement of Fishing Activity into Other Areas**

#### Sensitivity of Receptor

- 13.11.4.7 The sensitivity of the receptor groups remains the same or similar as described for displacement of fishing activity into other areas during the construction phase, as summarised in **Table 13.13**.

#### Magnitude of Impact

- 13.11.4.8 The magnitude of the receptor groups remains the same or less than as described for displacement of fishing activity into other areas during the construction phase, as summarised in **Table 13.13**.

#### Significance of Effect

- 13.11.4.9 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.25**. As such, displacement of fishing activity into other areas from decommissioning activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.25 Sensitivity, magnitude and impact significance relating to displacement of fishing activity into other areas during decommissioning of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Low	Minor

Receptor Group	Sensitivity	Magnitude	Significance
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Low	Low	Negligible
Otter trawls	Low	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

## Safety Considerations for Fishing Vessels

### Sensitivity of Receptor

- 13.11.4.10 The sensitivity of the receptor groups remains the same or similar as described for safety considerations for fishing vessels during the construction phase, as summarised in **Table 13.14**.

### Magnitude of Impact

- 13.11.4.11 The magnitude of the receptor groups remains the same or less than as described for safety considerations for fishing vessels during the construction phase, as summarised in **Table 13.14**.

### Significance of Effect

- 13.11.4.12 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.26**. As such, safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure from decommissioning activities) is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.26 Sensitivity, magnitude and impact significance relating to safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure during decommissioning) of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Low	No change	Negligible
Handline and fishers using gear with hooks	Low	No change	Negligible
Scallop dredgers	High	No change	Negligible
Otter trawls	High	No change	Negligible
Pelagic trawls	Medium	No change	Negligible

## Interference with Fishing Activity as a Result of Increased Vessel Traffic

### Sensitivity of Receptor

- 13.11.4.13 The sensitivity of the receptor groups remains the same or similar as described for interference with fishing activity as a result of increased vessel traffic during the construction phase, as summarised in **Table 13.15**.

### Magnitude of Impact

- 13.11.4.14 The magnitude of the receptor groups remains the same or less than as described for interference with fishing activity as a result of increased vessel traffic during the construction phase, as summarised in **Table 13.15**.

### Significance of Effect

- 13.11.4.15 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.27**. As such, interference with fishing activity as a result of increased vessel traffic from decommissioning activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.27 Sensitivity, magnitude and impact significance relating to interference with fishing activity as a result of increased vessel traffic during decommissioning of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Medium	Low	Minor
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Negligible	Low	Negligible
Otter trawls	Negligible	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

## Increased Steaming Times

### Sensitivity of Receptor

- 13.11.4.16 The sensitivity of the receptor groups remains the same or similar as described for increased steaming times during the construction phase, as summarised in **Table 13.16**.

### Magnitude of Impact

- 13.11.4.17 The magnitude of the receptor groups remains the same or less than as described for increased steaming times during the construction phase, as summarised in **Table 13.16**.

### Significance of Effect

- 13.11.4.18 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.28**. As such, increased steaming times from decommissioning activities is considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.28 Sensitivity, magnitude and impact significance relating to increased steaming times during decommissioning of the Offshore Development**

Receptor Group	Sensitivity	Magnitude	Significance
Potters	Low	Low	Negligible
Handline and fishers using gear with hooks	Low	Low	Negligible
Scallop dredgers	Negligible	Low	Negligible
Otter trawls	Negligible	Low	Negligible
Pelagic trawls	Negligible	Low	Negligible

### **Potential Impacts on Commercially Important Fish and Shellfish Resources**

- 13.11.4.19 The significance of effect for each commercially important species assessed within the fish and shellfish ecology assessment is expected to remain the same, if not less than, as described during the construction phase above for each impact. The potential impacts are, therefore, not expected to exceed **Minor** significance, which is **Not Significant** in EIA terms, for all receptor groups.

### **Supply Chain Opportunities for Local Fishing Vessels**

- 13.11.4.20 In the absence of detailed methodologies for the decommissioning phase the supply chain opportunities for local fishing vessels are considered the same as for the construction phase.

#### Sensitivity of Receptor

- 13.11.4.21 The sensitivity of the receptor groups remains the same or similar as described for supply chain opportunities during the construction phase, as summarised in **Table 13.17**.

#### Magnitude of Impact

- 13.11.4.22 The magnitude of the receptor groups remains the same or less than as described for supply chain opportunities during the construction phase, as summarised in **Table 13.17**.

Significance of Effect

13.11.4.23 A summary of the sensitivity of receptors, impact magnitude and overall effect significance is provided in **Table 13.29**. As such, supply chain opportunities for local fishing vessels from decommissioning activities are considered **Not Significant** in EIA terms, for all receptor groups.

**Table 13.29 Sensitivity, magnitude and impact significance relating to supply chain opportunities for local fishing vessels during decommissioning of the Offshore Development**

Receptor Group	Sensitivity	Magnitude (beneficial)	Significance
Potters	Negligible	Negligible	Negligible
Handline and fishers using gear with hooks	Negligible	Negligible	Negligible
Scallop dredgers	Medium	Low (beneficial)	Minor Beneficial
Otter trawls	Medium	Low (beneficial)	Minor Beneficial
Pelagic trawls	Medium	Low (beneficial)	Minor Beneficial

**13.11.5 Summary of Impact Assessment**

13.11.5.1 A summary of the impacts and effects identified for the Commercial Fisheries assessment is outlined in **Table 13.30**.

Table 13.30: Summary of Impacts and Effects for Commercial Fisheries

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
<i>Construction and Decommissioning</i>									
Loss or restricted access to fishing grounds	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Medium	Low	Minor	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Minor	Not Significant
			Handliners and fishers using gear with hooks	Low	Low	Negligible		Negligible	Not Significant
			Scallop dredgers	Low	Low	Negligible		Negligible	Not Significant
			Otter trawls	Low	Low	Negligible		Negligible	Not Significant
			Pelagic trawls	Negligible	Low	Negligible		Negligible	Not Significant
	Offshore Array and	Co14, Co9, Co11, Co18,	Potters	Medium	Low	Minor	No additional mitigation measures have been	Minor	Not Significant

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
Displacement of fishing activity into other areas	Offshore ECC	Co19, Co24, Co34 and Co36	Handliners and fishers using gear with hooks	Low	Low	Negligible	identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not Significant
			Scallop dredgers	Low	Low	Negligible		Negligible	Not Significant
			Otter trawls	Low	Low	Negligible		Negligible	Not Significant
			Pelagic trawls	Negligible	Low	Negligible		Negligible	Not Significant
Safety considerations of fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure)	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Low	No change	Negligible	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not Significant
			Handliners and fishers using gear with hooks	Low	No change	Negligible		Negligible	Not Significant
			Scallop dredgers	High	No change	Negligible		Negligible	Not Significant



Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
			Otter trawls	High	No change	Negligible		Negligible	Not Significant
			Pelagic trawls	Medium	No change	Negligible		Negligible	Not Significant
Interference with fishing activity as a result of increased vessel traffic	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Medium	Low	Minor	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Minor	Not Significant
			Handliners and fishers using gear with hooks	Low	Low	Negligible		Negligible	Not Significant
			Scallop dredgers	Negligible	Low	Negligible		Negligible	Not Significant
			Otter trawls	Negligible	Low	Negligible		Negligible	Not Significant
			Pelagic trawls	Negligible	Low	Negligible		Negligible	Not Significant
Increased steaming times	Offshore Array and	Co14, Co9, Co11, Co18, Co19, Co24,	Potters	Low	Low	Negligible	No additional mitigation measures have been identified for this effect	Negligible	Not Significant
			Handliners and	Low	Low	Negligible		Negligible	Not Significant

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
	Offshore ECC	Co34 and Co36	fishers using gear with hooks				above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .		
			Scallop dredgers	Negligible	Low	Negligible		Negligible	Not Significant
			Otter trawls	Negligible	Low	Negligible		Negligible	Not Significant
			Pelagic trawls	Negligible	Low	Negligible		Negligible	Not Significant
Potential impacts on commercially important fish and shellfish resources	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	N/A	N/A	N/A	N/A	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	N/A	Not significant
Supply chain opportunities for local fishing vessels	Offshore Array and	Co14, Co9, Co11, Co18, Co19, Co24,	Potters	Negligible	Negligible	Negligible	No additional mitigation measures have been identified for this effect	Negligible	Not significant
			Handliners and	Negligible	Negligible	Negligible		Negligible	Not significant

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms	
	Offshore ECC	Co34 and Co36	fishers using gear with hooks				above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .			
			Scallop dredgers	Medium	Low (Beneficial)	Minor Beneficial		Minor Beneficial		Not significant
			Otter trawls	Medium	Low (Beneficial)	Minor Beneficial		Minor Beneficial		Not significant
			Pelagic trawls	Medium	Low (Beneficial)	Minor Beneficial		Minor Beneficial		Not significant

*Operation and Maintenance*

Loss or restricted access to fishing grounds	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Medium	Negligible	Negligible	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not Significant
			Handliners and fishers using gear with hooks	Low	Negligible	Negligible		Negligible	Not Significant

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
			Scallop dredgers	Low	Negligible	Negligible		Negligible	Not Significant
			Otter trawls	Low	Low	Negligible		Negligible	Not Significant
			Pelagic trawls	Negligible	Negligible	Negligible		Negligible	Not Significant
Displacement of fishing activity into other areas	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Medium	Negligible	Negligible	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not significant
			Handliners and fishers using gear with hooks	Low	Low (beneficial)	Negligible		Negligible	Not significant
			Scallop dredgers	Low	Low	Negligible		Negligible	Not significant
			Otter trawls	Low	Low	Negligible		Negligible	Not significant
			Pelagic trawls	Negligible	Negligible	Negligible		Negligible	Not significant

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
Safety considerations to fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure)	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Low	Negligible	Negligible	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not Significant
			Handliners and fishers using gear with hooks	Low	Negligible	Negligible		Negligible	
			Scallop dredgers (Offshore Array)	High	No change	Negligible		Negligible	
			Scallop dredgers (Offshore ECC)	High	Low	Minor		Minor	
			Otter trawls (Offshore Array)	High	No Change	Negligible		Negligible	

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
			Otter trawls (Offshore ECC)	High	Low	Minor		Minor	Not Significant
			Pelagic trawls (Offshore Array)	Medium	No Change	Negligible		Negligible	Not Significant
			Pelagic trawls (Offshore ECC)	Medium	Negligible	Negligible		Negligible	Not Significant
Interference with fishing activity as a result of increased vessel traffic	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Medium	Negligible	Negligible	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not Significant
			Handliners and fishers using gear with hooks	Low	Negligible	Negligible		Negligible	Not Significant
			Scallop dredgers	Negligible	Negligible	Negligible		Negligible	Not Significant

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
			Otter trawls	Negligible	Negligible	Negligible		Negligible	Not Significant
			Pelagic trawls	Negligible	Negligible	Negligible		Negligible	Not Significant
Increased steaming times	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Low	Negligible	Negligible	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not Significant
			Handliners and fishers using gear with hooks	Low	Negligible	Negligible		Negligible	
			Scallop dredgers	Negligible	Negligible	Negligible		Negligible	
			Otter trawls	Negligible	Negligible	Negligible		Negligible	
			Pelagic trawls	Negligible	Negligible	Negligible		Negligible	
Potential impacts on commercially	Offshore Array and	Co14, Co9, Co11, Co18, Co19, Co24,	N/A	N/A	N/A	N/A	No additional mitigation measures have been identified for this effect	N/A	Not significant

Salamander Project Activity and Impact	Project Aspect	Embedded Mitigation	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Significance of Effect in EIA Terms
important fish and shellfish resources	Offshore ECC	Co34 and Co36					above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .		
Supply chain opportunities for local fishing vessels	Offshore Array and Offshore ECC	Co14, Co9, Co11, Co18, Co19, Co24, Co34 and Co36	Potters	Negligible	Negligible	Negligible	No additional mitigation measures have been identified for this effect above and beyond the embedded mitigation listed in <b>Table 13.7</b> as it was concluded that the effect was <b>Not Significant</b> .	Negligible	Not significant
			Handliners and fishers using gear with hooks	Negligible	Negligible	Negligible		Negligible	
			Scallop dredgers	Medium	Negligible	Negligible		Negligible	
			Otter trawls	Medium	Negligible	Negligible		Negligible	
			Pelagic trawls	Medium	Negligible	Negligible		Negligible	



## 13.12 Mitigation and Monitoring

13.12.1.1 All of the potential effects to commercial fisheries receptors are identified as **Not Significant** in terms of the EIA Regulations, with the acknowledgement of the embedded mitigation being implemented in full (**Section 13.8.3**). Accordingly, no additional mitigation or further monitoring requirements have been put forward as there are no significant effects which require additional measures.

## 13.13 Cumulative Effect Assessment

### 13.13.1 Introduction

13.13.1.1 A Cumulative Effects Assessment (CEA) has been made based on existing and proposed developments in the Study Area. The approach to the CEA is described in **Volume ER.A.2, Chapter 6: EIA Methodology**. Cumulative effects are defined as those effects on a receptor that may arise when the proposed Salamander Project is considered together with other projects. Projects are only included in the CEA if an EIA is/was required.

13.13.1.2 The maximum spatial extent of potential effects on Commercial Fisheries as identified within this chapter are determined by a 100 km buffer around the Offshore Development Area. Areas beyond this range are unlikely to experience any measurable change beyond this range. As such, only plans or projects with potential to overlap spatially and temporally will be included in the cumulative assessment.

13.13.1.3 As described within **Volume ER.A.4, Annex 6.2: Cumulative Effects Assessment Technical Annex**, projects which do not have detailed impact data available at scoping or which have not submitted scoping requests or consent applications/EIAs up to six months before Salamander's application submission will not be considered as part of any in-depth cumulative or in-combination assessment. This includes future ScotWind and Innovation Targeted Oil and Gas (INTOG) projects. These projects will need to include any impacts from the Salamander Project in their cumulative effect assessments when they submit a consent application.

13.13.1.4 For the purposes of this assessment, projects and activities have not been included where they are considered to be included in the baseline, such as established shipping routes, aggregate areas, operational cables and pipelines, anchorages and existing restrictions within Marine Protected Areas (MPAs) and Fisheries Management Areas. It is considered that given the amount of time these features have been in place, their effects on commercial fisheries receptors will have become clearly established, and this will have been taken into account within the baseline characterisation.

13.13.1.5 On this basis, the projects considered within this cumulative assessment are outlined within **Table 13.31**. Further information on these projects is outlined in **Volume ER.A.4, Annex 6.2: Cumulative Effects Assessment Technical Annex**.

**Table 13.31 Developments identified within a 100 km radius of the Offshore Development**

Development	Type	Project Phase	Closest distance from other project		Reasons for Inclusion
			<i>Salamander Project Array</i>	<i>Salamander Project ECC</i>	
Hywind Scotland Pilot Park	Floating Offshore Wind Farm	Operational	11.7 km	8.1 km	The Hywind project's array is located 11.7 km and 8.1 km from the OAA and Offshore ECC respectively. The Hywind project's ECC is located 14.3

Development	Type	Project Phase	Closest distance from other project		Reasons for Inclusion
			<i>Salamander Project Array</i>	<i>Salamander Project ECC</i>	
					km and 0.1 km from the OAA and Offshore ECC respectively.
European Offshore Wind Deployment Centre	Offshore Wind Farm	Operational	57.3 km	32.4 km	This development was included as it has been operational since 2018 and it is 57.3 and 32.4 km from the OAA and Offshore ECC respectively.
Beatrice Offshore Wind Farm	Offshore Wind Farm	Operational	114.1 km	97 km	This project was included as it is operational and the project's array is 114.1 km and 97 km from the OAA and Offshore ECC respectively.
Kincardine Offshore Wind Farm	Floating Offshore Wind Farm	Operational	71.3 km	54.8 km	This operational development was included as its array is 71.3 km and 54.8 km from the OAA and Offshore ECC respectively.
Moray East Offshore Wind Farm	Offshore Wind Farm	Operational	95.3 km	80 km	This development was included as its array is 95.3 km and 80 km from the OAA and Offshore ECC respectively.
Seagreen Alpha and Bravo Offshore Wind Farms	Offshore Wind Farm	Operational; Screening Report submitted for proposed increase in height of remaining consented, but not constructed, 36 turbines.	103.1 km	95.6 km	The Seagreen Alpha and Bravo projects' arrays are 103.1 km and 95.6 km from the OAA and Offshore EEC respectively.
Moray West Offshore Wind Farm	Offshore Wind Farm	Under Construction	107.7 km	87.8 km	This project is under construction and scheduled to be operational by 2025. This project's array is 107.7 km and 87.8 km from the OAA and Offshore ECC respectively.

Development	Type	Project Phase	Closest distance from other project		Reasons for Inclusion
			<i>Salamander Project Array</i>	<i>Salamander Project ECC</i>	
Eastern Green Link 2 (EGL2)	Interconnector	Consented	26.78 km	2.86 km	There is potential for temporal overlap of construction timelines and the EGL2 project is 26.78 and 2.86 km from the OAA and Offshore ECC respectively.
NorthConnect	Interconnector	Consented	Overlaps	Overlaps	The NorthConnect Project overlaps with both the OAA and Offshore ECC.
Central North Sea Electrification (CNSE) Project	Platform Electrification	Scoping Submitted	18.1 km	4.1 km	This proposed development was included as it is scheduled to be operational by 2028 and its cable route is 18.1 km and 4.1 km from the OAA and Offshore ECC respectively. The cable landfall is also within 20 km of the Salamander Project.
Cenos Floating Offshore Wind Farm Export Cable	Offshore Wind Farm	Scoping Submitted	Overlaps	Overlaps	The Cenos Floating Offshore Wind Farm project is scheduled to be operational by 2028. The project is currently considering three export cable route options, one of which would pass through the north of the OAA and all routes would cross the Offshore ECC.
Morven Offshore Wind Farm	Offshore Wind Farm	Scoping Submitted	74.9 km	74.2 km	This project's array is 74.9 km and 74.2 km from the Offshore Array and ECC respectively.
Muir Mhòr Offshore Wind Farm	Floating Offshore Wind Farm	Scoping Submitted	5.53 km	Overlaps	This proposed development was included as it is scheduled to be operational by 2030; its ECC is 5.53 km from the OAA and overlaps the Offshore ECC. The Muir Mhòr project's array area is also 28.4 km and 30.9 km from the Offshore Array and Offshore ECC respectively.

Development	Type	Project Phase	Closest distance from other project		Reasons for Inclusion
			<i>Salamander Project Array</i>	<i>Salamander Project ECC</i>	
Green Volt Floating Offshore Wind Farm	Floating Offshore Wind Farm	Consent Application Submitted	0.3 km	Overlaps	This proposed development was included as construction and operational phases may overlap and its export cable overlaps the Offshore ECC and passes 0.3 km from the OAA. The Green Volt array is also 33.6 km from the OAA and 38.9 km from the Offshore ECC.
MarramWind Offshore Wind Farm	Floating Offshore Wind Farm	Scoping Submitted	1.5 km	Overlaps	This proposed development was included as operational phases may overlap and the MarramWind ECC search area is 1.5 km from the OAA and overlaps with the Offshore ECC <sup>1</sup> . The MarramWind array is also 47 km from the OAA and 50.9 km from the Offshore ECC.
Ossian Offshore Wind Farm	Floating Offshore Wind Farm	Scoping Submitted	79.5 km	79.5 km	This proposed development was included as it is 79.5 km from the Salamander Project.
Caledonia Offshore Wind Farm	Offshore Wind Farm	Scoping Submitted	80.3 km	62.9 km	This proposed development was included as it is 80.3 km and 62.9 km from the OAA and Offshore ECC respectively, and construction and operational phases are scheduled to overlap.
Buchan Floating Offshore Wind Farm	Floating Offshore Wind Farm	Scoping Submitted	1.44 km	Overlaps	This proposed development was included as is its export cable corridor area of search is 1.44 km from the OAA and overlaps with the Offshore ECC, and it's array is 66.3 km from the OAA and

<sup>1</sup> Distances provided for MaramWind are based on the ECC area of search, and should not be considered necessarily indicative of the route that will subsequently be proposed.

13.13.1.6 The following potential impacts in **Table 13.32** have been taken forward into the Commercial Fisheries CEA.

**Table 13.32 Potential effects taken forward into the Commercial Fisheries Cumulative Effects Assessment**

Effect Assessed Alone	Potential Cumulative Effect	Rationale
<i>Construction</i>		
Loss or restricted access to fishing grounds	Yes	Potential for cumulative effects via loss or restricted access to fishing grounds will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this effect, are considered.
Displacement of fishing activity into other areas	Yes	
Interference with fishing activity as a result of increased vessel traffic	Yes	
Increased steaming times	Yes	
Safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure)	Yes	Potential for cumulative effects via loss or damage to fishing gear due to snagging will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this effect, are considered.
Potential impacts on commercially important fish and shellfish resources	Yes	Potential for cumulative effects via potential impacts upon commercially important fish and shellfish resources will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this effect, are considered.
Supply chain opportunities for local fishing vessels	Yes	Potential for cumulative effects via supply chain opportunities for local fishing vessels will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this (beneficial) effect, are considered.
<i>Operation and Maintenance</i>		
Loss or restricted access to fishing grounds	Yes	Potential for cumulative effects via loss or damage to fishing gear due to snagging will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this effect, are considered.
Displacement of fishing activity into other areas	Yes	

Effect Assessed Alone	Potential Cumulative Effect	Rationale
Interference with fishing activity as a result of increased vessel traffic	Yes	
Increased steaming times	Yes	
Safety considerations for fishing vessels (via loss or damage to gear due to snagging or entanglement with offshore and floating infrastructure)	Yes	Potential for cumulative effects via loss or damage to fishing gear due to snagging will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this effect, are considered.
Potential impacts on commercially important fish and shellfish resources	Yes	Potential for cumulative effects via potential impacts upon commercially important fish and shellfish resources will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this effect, are considered.
Supply chain opportunities for local fishing vessels	Yes	Potential for cumulative effects via supply chain opportunities for local fishing vessels will be greatest when the highest number of other schemes within the Commercial Fisheries Study Area (100 km) which would also result in this (beneficial) effect, are considered.

#### Decommissioning

It is expected that all effects associated with decommissioning assessed alone, and therefore also cumulatively, are similar or of lower magnitude as those identified within the construction phase of the Salamander Project. This assumption is subject to best practice methods and technology appropriate at the time of decommissioning.

13.13.1.7 A description of the significance of cumulative effects upon commercial fisheries receptors, arising from each identified impact is given below.

13.13.1.8 The likelihood of any significant effects on commercial fisheries occurring would largely depend on the operational practices of each particular fleet, the location and extent of their grounds relative to other developments and the timings of the construction, operational and decommissioning phases. Effects and receptor groups are only discussed where there is the potential for a cumulative effect to arise.

#### 13.13.2 Construction

13.13.2.1 The assessment of potential cumulative impacts on commercial fisheries during the operational phase of the Salamander Project is based on the following key assumptions:

- Existing, fully operational offshore wind farm sites within the cumulative Study Area, i.e. within 100 km of the Salamander Project have been considered, as scope exists for cumulative impacts on fishing activity via operation and maintenance related activities on these sites and construction activities on the Salamander Project; and

- Proposed offshore wind farm projects (and other projects such as interconnectors) that may be constructed during the construction phase of the Salamander Project have been considered, as scope exists for cumulative impacts on fishing activity via construction impacts on these projects and operation and maintenance related impacts from the Salamander Project.

### Loss or Restricted Access to Fishing Grounds

#### *Potters*

- 13.13.2.2 A cumulative loss or restricted access to additional fishing grounds for potters could occur should there be temporal overlap or sequential construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time.
- 13.13.2.3 With respect to receptor sensitivity, as for project-only impacts, potters are defined as having a **Medium** sensitivity to this potential effect due to having limited spatial adaptability; limited ability to deploy an alternative gear type and limited spatial tolerance due to dependence upon a limited number of fishing grounds.
- 13.13.2.4 In terms of magnitude of impact, the main area where impact will arise on this receptor group will be along the nearshore sections of the Offshore ECC for the Salamander Project. This area of proposed works is located within 1 km or overlaps the proposed cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MaramWind<sup>2</sup> offshore wind projects. Therefore, scope exists for a cumulative loss of access to fishing grounds if construction of these multiple projects was to occur simultaneously or sequentially, i.e. straight after each other, therefore increasing the duration of construction disturbance.
- 13.13.2.5 Assuming a worst-case of simultaneous or sequential construction within the cable corridors of these multiple projects, the magnitude of impact (of loss/restricted access to potting grounds during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.6 The **Medium** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Moderate** impact, which is **Significant** in EIA terms.

#### *Additional Mitigation*

- 13.13.2.7 In order to mitigate this potential cumulative impact to a level that is non-significant in EIA terms, i.e. Minor or less, additional mitigation is proposed. This will entail the Salamander Project working closely with the other developers active in this region to develop a coordinated approach to construction in the nearshore region of the Offshore ECC and fisheries liaison that seeks to minimise disruption to this receptor group.
- 13.13.2.8 More specifically, this is expected to entail development of a joint Fisheries Management and Mitigation Strategy (FMMS), that covers these multiple projects so that local fishers have clarity on the programme of works across multiple projects; key contacts within each individual project; which operational measures will be implemented, i.e. frequency of NtMs; use of OFLOS; use of safety zones.

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<sup>2</sup> Distances provided for MaramWind are based on the ECC area of search, and should not be considered necessarily indicative of the route that will subsequently be proposed.

13.13.2.9 It is expected that this mitigation measure will be secured through the Salamander Project's adherence to FLOWW guidance.

13.13.2.10 Successful implementation of these additional mitigation measures is predicted to reduce this impact to **Minor**, which is **Not Significant** in EIA terms.

#### *Handliners and Fishers Using Gear with Hooks*

13.13.2.11 A cumulative loss or restricted access to additional fishing grounds for handliners could occur should there be temporal overlap in construction timelines with other projects within the Study Area.

13.13.2.12 With respect to receptor sensitivity, as for project-only impacts, handliners are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).

13.13.2.13 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECCs for the Salamander Project and cable corridors for other projects. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative loss of access to fishing grounds if construction of these multiple projects was to occur simultaneously or sequentially.

13.13.2.14 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of loss/restricted access to potting grounds during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).

13.13.2.15 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

#### *Scallop Dredgers*

13.13.2.16 A cumulative loss or restricted access to additional fishing grounds for scallop dredgers could occur should there be temporal overlap in construction timelines with other projects within the Study Area.

13.13.2.17 With respect to receptor sensitivity, as for Project-only impacts, scallop dredgers are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).

13.13.2.18 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative loss of access to fishing grounds if construction of these multiple projects was to occur simultaneously or sequentially.

13.13.2.19 However, a key difference between this receptor group and the potters and handliners groups, is that the majority of scallop dredgers are >12 m vessels that will not work in nearshore areas, where the greatest potential for cumulative impact from simultaneous/sequential cable installation exists. This receptor group is also quite nomadic in nature, fishing a much wider range of grounds than the other receptor groups. Even



so, assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of loss/restricted access to potting grounds during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).

- 13.13.2.20 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

#### *Otter Trawls*

- 13.13.2.21 A cumulative loss or restricted access to additional fishing grounds for otter trawls, could occur should there be temporal overlap in construction timelines with other projects within the Study Area.
- 13.13.2.22 With respect to receptor sensitivity, as for Project-only impacts, otter trawls are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).
- 13.13.2.23 In terms of magnitude of impact, potential cumulative impacts may arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. However, it should be noted that VMS data indicate that there is negligible otter trawl activity within the 12 nm limit (see **Figure 13-12**). The majority of instances where the Salamander Project ECC intersects (or comes within 1 km of) other projects are within the 12 nm limit, and as such the list provide above is considered highly precautionary.
- 13.13.2.24 This receptor group also fishes in offshore areas, including the array areas of the multiple offshore wind projects proposed in this region. Therefore, scope exists for a cumulative loss of access to fishing grounds if construction of these multiple projects (both within their export cable corridors and/or array areas, was to occur simultaneously or sequentially).
- 13.13.2.25 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors and/or array areas of these multiple projects, the magnitude of impact (of loss/restricted access to potting grounds during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.26 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

#### *Pelagic Trawls*

- 13.13.2.27 A cumulative loss or restricted access to additional fishing grounds for pelagic trawls could occur should there be temporal overlap in construction timelines with other projects within the Study Area.
- 13.13.2.28 With respect to receptor sensitivity, as for Project-only impacts, pelagic trawls are defined as having a **Negligible** sensitivity to this potential effect (receptor has high recoverability, an extensive operational range and high method versatility).
- 13.13.2.29 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other

projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. However, it should be noted that VMS data indicate that there is negligible pelagic trawl activity within the 12 nm limit (see **Figure 13-9**). The majority of instances where the Salamander Project ECC intersects (or comes within 1 km) of other projects are within the 12 nm limit, and as such the list provide above is considered highly precautionary.

- 13.13.2.30 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of loss/restricted access to fishing grounds during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.31 The **Negligible** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Negligible** impact, which is **Not Significant** in EIA terms.

#### **Displacement of Fishing Activity into Other Areas**

- 13.13.2.32 The construction phase of the Salamander Project has the potential to occur either simultaneously or sequentially with other proposed projects in this region. These include NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. In this scenario, these multiple construction activities could result in displacement of fishing activity into other areas where no construction is occurring, so that displaced fishing vessels can continue to try and work. This would result in a cumulative impact on the fishing receptor groups identified in this assessment.

#### *Potters*

- 13.13.2.33 A cumulative displacement of fishing activity into areas where no construction is taking place and other vessels currently fish, could occur for potters should there be temporal overlap in construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time, or sequentially.
- 13.13.2.34 With respect to receptor sensitivity, as for Project-only impacts, potters are defined as having a **Medium** sensitivity to this potential effect due to having limited spatial adaptability; limited ability to deploy an alternative gear type and limited spatial tolerance due to dependence upon a limited number of fishing grounds.
- 13.13.2.35 In terms of magnitude of impact, the main area where impact will arise on this receptor group will be along the nearshore section of the Offshore ECC for the Salamander Project. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative displacement of potters onto adjacent grounds if construction of these multiple projects was to occur simultaneously or sequentially.
- 13.13.2.36 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of displacement of fishing activity into other areas during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.37 The **Medium** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Moderate** impact, which is **Significant** in EIA terms.

### *Additional Mitigation*

- 13.13.2.38 In order to mitigate this potential cumulative impact to a level that is non-significant in EIA terms, i.e. minor or less, additional mitigation is proposed. This will entail the Salamander Project working closely with the other developers active in this region to develop a coordinated approach to construction in the nearshore region of the Offshore ECC and fisheries liaison that seeks to minimise disruption to this receptor group.
- 13.13.2.39 More specifically, this will entail development of a joint Fisheries Management and Mitigation Strategy (FMMS), that covers these multiple projects so that local fishers have clarity on the programme of works across multiple project; key contacts within each individual project; which operational measures will be implemented, i.e. frequency of NtMs; use of OFLOS; use of exclusion / safety zones.
- 13.13.2.40 It is expected that this mitigation measure (**Volume ER.A.4, Annex 6.1: Commitments and Mitigations Register, Co 51**) will be included as condition of any Marine Licence(s) issued for the Salamander Project.
- 13.13.2.41 Successful implementation of these additional mitigation measures is predicted to reduce this impact to **Minor**, which is **Not Significant** in EIA terms.

### *Handliners and Fishers Using Gear with Hooks*

- 13.13.2.42 A cumulative displacement of fishing activity into areas where no construction is taking place and other vessels currently fish could occur for handliners should there be temporal overlap in construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time.
- 13.13.2.43 With respect to receptor sensitivity, as for Project-only impacts, handliners are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).
- 13.13.2.44 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative displacement of these vessels onto adjacent grounds that may be fished by other vessels, if construction of these multiple projects was to occur simultaneously or sequentially.
- 13.13.2.45 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of displacement onto adjacent grounds during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.46 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

### *Scallop Dredgers*

- 13.13.2.47 A cumulative displacement of fishing activity into areas where no construction is taking place and other vessels currently fish could occur for scallop dredgers should there be temporal overlap in construction

timelines with other projects within the Study Area, specifically if/when export cables from multiple projects are installed at the same time.

- 13.13.2.48 With respect to receptor sensitivity, as for Project-only impacts, scallop dredgers are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).
- 13.13.2.49 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative displacement of these vessels onto areas where other vessels currently fish, if construction of these multiple projects was to occur simultaneously or sequentially.
- 13.13.2.50 However, a key difference between this receptor group and the potters and handliners groups, is that the majority of scallop dredgers are >12 m vessels that will not work in nearshore areas, where the greatest potential for cumulative impact from simultaneous/sequential cable installation exists. This receptor group is also quite nomadic in nature, fishing a much wider range of grounds than the other receptor groups. Even so, assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of loss/restricted access to potting grounds during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.51 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

#### *Otter Trawls*

- 13.13.2.52 A cumulative impact of displacement from construction areas to adjacent areas where other vessels currently fish could occur should there be temporal overlap in construction timelines with other projects within the Study Area.
- 13.13.2.53 With respect to receptor sensitivity, as for Project-only impacts, otter trawls are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).
- 13.13.2.54 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects.
- 13.13.2.55 This receptor group also fishes in offshore areas, including the array areas of the multiple offshore wind projects proposed in this region. This means that scope exists for a cumulative displacement of these vessels from multiple projects (both within their export cable corridors and/or array areas) onto adjacent areas, if construction on these multiple projects was to occur simultaneously or sequentially.

13.13.2.56 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors and/or offshore array areas of these multiple projects, the magnitude of impact (of displacement) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).

13.13.2.57 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

#### *Pelagic Trawls*

13.13.2.58 A cumulative impact of displacement from construction areas to adjacent areas where other vessels currently fish could occur should there be temporal overlap in construction timelines with other projects within the Study Area.

13.13.2.59 With respect to receptor sensitivity, as for Project-only impacts, pelagic trawls are defined as having a **Negligible** sensitivity to this potential effect (Receptor has high recoverability, an extensive operational range and high method versatility).

13.13.2.60 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects.

13.13.2.61 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of displacement) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).

13.13.2.62 The **Negligible** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Negligible** impact, which is **Not Significant** in EIA terms.

#### **Interference with Fishing Activity as a Result of Increased Vessel Traffic**

13.13.2.63 The construction phase of the Salamander Project has the potential to occur either simultaneously or sequentially with other proposed projects in this region. These include, NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. In this scenario these multiple construction activities could result in a cumulative impact on fishing activity of key receptor groups due to increased vessel traffic associated with the construction phases of these multiple projects and/or re-directed commercial shipping.

#### *Potters*

13.13.2.64 A cumulative impact via increased vessel traffic interfering with fishing activity could occur for potters should there be temporal overlap in construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time.

13.13.2.65 With respect to receptor sensitivity, as for Project-only impacts, potters are defined as having a **Medium** sensitivity to this potential effect due to having limited spatial adaptability; limited ability to deploy an alternative gear type and limited spatial tolerance due to dependence upon a limited number of fishing grounds.

13.13.2.66 In terms of magnitude of impact, the main area where impact will arise on this receptor group will be in the areas adjacent to the nearshore sections of the Offshore ECC for the Salamander Project. This area overlaps

with areas adjacent to the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative impact via interference with fishing activity if construction of these multiple projects was to occur simultaneously or sequentially and all nearshore fishing vessels were excluded from these multiple offshore export cable corridors. This would result in many vessels needing to try and continue fishing activities in a much-reduced spatial area.

13.13.2.67 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (interference of fishing activity due to increased vessel traffic during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).

13.13.2.68 The **Medium** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Moderate** impact, which is **Significant** in EIA terms.

#### *Additional Mitigation*

13.13.2.69 In order to mitigate this potential cumulative impact to a level that is non-significant in EIA terms, i.e. minor or less, additional mitigation is proposed. This will entail the Salamander Project working closely with the other developers active in this region to develop a coordinated approach to construction in the nearshore region of the Offshore ECC and fisheries liaison that seeks to minimise disruption to this receptor group.

13.13.2.70 More specifically, this will entail development of a joint Fisheries Management and Mitigation Strategy (FMMS), that covers these multiple projects so that local fishers have clarity on the programme of works across multiple project; key contacts within each individual project; which operational measures will be implemented, i.e. frequency of NtMs; use of OFLOS; use of safety zones.

13.13.2.71 To specifically mitigate risks to fishing activity from increased vessel traffic, defined construction vessel access/transit routes will need to be developed which local vessels will need to stay out of to avoid any impact on their activities.

13.13.2.72 It is expected that this mitigation measure (**Volume ER.A.4, Annex 6.1: Commitments and Mitigations Register, Co 51**) will be included as condition of any Marine Licence(s) issued for the Salamander Project.

13.13.2.73 Successful implementation of these additional mitigation measures is predicted to reduce this impact to **Minor**, which is **Not Significant** in EIA terms.

#### *Handliners and Fishers Using Gear with Hooks*

13.13.2.74 A cumulative impact via increased vessel traffic interfering with fishing activity could occur for handliners should there be temporal overlap in construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time.

13.13.2.75 With respect to receptor sensitivity, as for Project-only impacts, handliners are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).

13.13.2.76 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore

wind projects. Therefore, scope exists for a cumulative impact via increased vessel traffic interfering with fishing activity if construction of these multiple projects was to occur simultaneously or sequentially.

- 13.13.2.77 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (interference with fishing activity due to increased vessel traffic during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.78 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

#### *Scallop Dredgers*

- 13.13.2.79 A cumulative impact via increased vessel traffic interfering with fishing activity could occur for scallop dredgers should there be temporal overlap in construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time.
- 13.13.2.80 With respect to receptor sensitivity, as for Project-only impacts, scallop dredgers are defined as having a **Negligible** sensitivity to this potential effect (Receptor has an extensive operational range and high method versatility).
- 13.13.2.81 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative impact via increased vessel traffic interfering with fishing activity if construction of these multiple projects was to occur simultaneously or sequentially.
- 13.13.2.82 However, a key difference between this receptor group and the potters and handliners groups, is that the majority of scallop dredgers are >12 m vessels that will not work in nearshore areas, where the greatest potential for cumulative impact from simultaneous/sequential cable installation exists. This receptor group is also quite nomadic in nature, fishing a much wider range of grounds than the other receptor groups. Even so, assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (interference with fishing activity due to increased vessel traffic during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.83 The **Negligible** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Negligible** impact, which is **Not Significant** in EIA terms.

#### *Otter Trawls*

- 13.13.2.84 A cumulative impact via increased vessel traffic interfering with fishing activity could occur for otter trawls should there be temporal overlap in construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time.
- 13.13.2.85 With respect to receptor sensitivity, as for project-only impacts, otter trawls are defined as having a **Negligible** sensitivity to this potential effect (Receptor has an extensive operational range and high method versatility).

- 13.13.2.86 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects.
- 13.13.2.87 This receptor group also fishes in offshore areas, including the array areas of the multiple offshore wind projects proposed in this region. This means that scope exists for a cumulative impact of interference from increased vessel activity if construction on these multiple projects was to occur simultaneously or sequentially.
- 13.13.2.88 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors and/or array areas of these multiple projects, the magnitude of impact (of displacement) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.89 The **Negligible** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Negligible** impact, which is **Not Significant** in EIA terms.

#### *Pelagic Trawls*

- 13.13.2.90 A cumulative impact via increased vessel traffic interfering with fishing activity could occur for pelagic trawls should there be temporal overlap in construction timelines with other projects within the Study Area, specifically in the nearshore area if/when export cables from multiple projects are installed at the same time.
- 13.13.2.91 With respect to receptor sensitivity, as for Project-only impacts, pelagic trawls are defined as having a **Negligible** sensitivity to this potential effect (Receptor has high recoverability, an extensive operational range and high method versatility).
- 13.13.2.92 In terms of magnitude of impact, potential cumulative impacts will arise on this receptor group both within the Offshore ECC for the Salamander Project and other project export cable corridors. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects.
- 13.13.2.93 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (of interference on fishing activity due to increased vessel traffic) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.94 The **Negligible** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Negligible** impact, which is **Not Significant** in EIA terms.

#### **Safety Considerations for Fishing Vessels**

- 13.13.2.95 As per the Project-only assessment, this cumulative impact assessment focusses on the safety (and potential commercial) issues that may arise by fishing activity within the Offshore Development Area during the construction phase, i.e. via snagging or entanglement of fishing gear on Project infrastructure, including any elements related to cable repair/remediation/protection works that may take place during this phase.
- 13.13.2.96 The assessment of potential cumulative impacts (risks) to fishing vessels in transit is assessed in **Volume ER.A.2 Chapter 14: Shipping and Navigation** (as is potential snagging resulting from presence of vessel anchors).



- 13.13.2.97 As previously described for the Project-only assessment, the commercial fisheries receptor groups are considered to have a range of sensitivities to this potential impact from low to high. Similarly to the Project-only assessment, magnitude of impact is also judged as **No Change** as during the construction phase.
- 13.13.2.98 Even though there is the potential for increased cumulative impacts via snagging and/or entanglement from offshore infrastructure associated with the multiple projects expected to be constructed in this region, potential impacts related to gear snagging on seabed obstructions will be mitigated by all fishing activity being excluded from all the Offshore Development Areas for the duration of construction works.
- 13.13.2.99 Therefore, the combination of a range of receptor sensitivities with a magnitude of impact of **No Change**, results in a **Negligible** impact, which is **Not Significant** in EIA terms.

#### **Increased Steaming Times**

- 13.13.2.100 Potential exists for cumulative impacts on the fishing receptor groups due to increased steaming times to avoid areas of construction activities on both the Salamander Project and all the other developments that may be constructed in the region either simultaneously and/or sequentially.

#### *Potters*

- 13.13.2.101 With respect to receptor sensitivity, as for Project-only impacts, potters are defined as having a **Low** sensitivity to this potential effect due to having limited spatial adaptability; limited ability to deploy an alternative gear type and limited spatial tolerance due to dependence upon a limited number of fishing grounds.
- 13.13.2.102 In terms of magnitude of impact, the main area where impact will arise on this receptor group will be along the nearshore sections of the Offshore ECC for the Salamander Project. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative impact via increased steaming times (and subsequent increased fuel costs/reduced profit) if construction of these multiple projects was to occur simultaneously or sequentially.
- 13.13.2.103 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (increased steaming times) during cable installation works of multiple projects) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).
- 13.13.2.104 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.13.2.105 The same potential cumulative impact via increased steaming times may impact the handliners receptor group. With respect to receptor sensitivity, as for Project-only impacts, handliners are defined as having a **Low** sensitivity to this potential effect (not particularly vulnerable to impacts that may arise from the Salamander Project and moderate recoverability due to the ability to mitigate loss of fishing area by operating in a range of alternative areas).
- 13.13.2.106 Assuming a worst-case of simultaneous or sequential construction within the export cable corridors of these multiple projects, the magnitude of impact (increased steaming times) is judged to increase from **Low** (Project-only) to **Medium** (cumulative).

13.13.2.107 The **Low** sensitivity of receptor combined with **Medium** magnitude of impact results in a **Minor** impact, which is **Not Significant** in EIA terms.

*Scallop Dredgers / Otter Trawls / Pelagic Trawls*

13.13.2.108 With respect to receptor sensitivity, as for Project-only impacts, these three receptor groups (all mobile gear), are defined as having a **Negligible** sensitivity to this potential effect (Receptor has an extensive operational range and high method versatility).

13.13.2.109 In terms of magnitude of impact, potential cumulative impacts will arise on these receptor groups both within the Offshore ECC and OAA for the Salamander Project and other project footprints. This area of proposed works is located within 1 km / overlaps the proposed offshore export cable corridors for a number of other projects, including NorthConnect interconnector, Green Volt, Muir Mhòr, Cenos and MarramWind offshore wind projects. Therefore, scope exists for a cumulative impact via increased steaming times if construction of these multiple projects was to occur simultaneously or sequentially.

13.13.2.110 Therefore, even though these receptor groups are highly mobile and quite nomadic in nature, the magnitude of impact (increased steaming times) is judged increase from **Low** (Project-only) to **Medium** (cumulative), due to the large number of sites that may be in the construction phase at the same time in the region.

13.13.2.111 The **Negligible** sensitivity of receptors combined with **Medium** magnitude of impact results in a **Minor** impact on these receptors, which is **Not Significant** in EIA terms.

#### **Potential Impacts on Commercially Important Fish and Shellfish Resources**

13.13.2.112 The following potential cumulative impacts on fish and shellfish ecology via the construction phases of the Salamander Project have been identified:

- Temporary habitat loss/disturbance;
- Underwater sound impacting fish and shellfish receptors; and
- Increased Suspended Sediment Concentrations (SSCs) and associated sediment deposition.

13.13.2.113 There is potential for cumulative effects to result in both adverse and/or beneficial effects on commercially important fish and shellfish populations. Effects include behavioural changes or increases/declines in abundance, which could, therefore, potentially affecting the commercial fisheries which target those species, as discussed in **Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology**.

13.13.2.114 The fish and shellfish ecology assessment concluded that during the construction phase of the Salamander Project, the associated cumulative effects will be **Not Significant** in EIA terms.

13.13.2.115 Therefore, noting that there will only be minor cumulative impacts on fish and shellfish resources during the construction phase of the Offshore Development (and other projects in this region), it can be concluded cumulative impacts on any commercially important species and thus, all commercial fisheries receptor groups; is **Not Significant** in EIA terms.

#### **Supply Chain Opportunities for Local Fishing Vessels**

13.13.2.116 The project-only assessment of this potential impact concluded negligible impacts for the potters and handliner receptor groups and minor beneficial impact for the scallop, otter trawl and pelagic trawl groups.

- 13.13.2.117 In terms of potential cumulative impacts, a **Negligible** impact is also predicted for the potters and handliner receptors for the same reasons explained in the Project-only assessment, i.e. limited vessel size and equipment resulting in limited opportunities for supply chain support.
- 13.13.2.118 For the remaining groups, due to the construction phases of multiple projects in the region occurring either simultaneously or sequentially, supply chain opportunities, i.e. the magnitude of impact, for these fishing vessels should increase.
- 13.13.2.119 Therefore, assuming the project-only magnitude of impact increases from **Low** to **Medium**, when combined with a **Medium** sensitivity, a **Moderate beneficial** impact is predicted.

### 13.13.3 Operation and Maintenance

- 13.13.3.1 The assessment of potential cumulative impacts on commercial fisheries during the operational phase of the Salamander Project is based on the following key assumptions:
- Existing, fully operational offshore wind farm sites within the cumulative Study Area, i.e. within 100 km of the Salamander Project have been considered, as scope exists for cumulative impacts on fishing activity via operation and maintenance related activities on these sites and similar operation and maintenance activities on the Salamander Project; and
  - Proposed offshore wind farm projects (and other projects such as interconnectors) that may be constructed during the operational phase of the Salamander Project have been considered, as scope exists for cumulative impacts on fishing activity via construction impacts on these projects and operation and maintenance related impacts from the Salamander Project.

#### Loss or Restricted Access to Fishing Grounds due to exclusion from Array Areas

- 13.13.3.2 Once the Salamander Project is operational, it has been assumed that fishing activity will be excluded from the OAA for the lifetime of the project, due to the risk of fishing in this area. For other offshore wind farm projects considered in this assessment that have fixed foundations, it is assumed that fishing will still be undertaken within the arrays. Therefore, no cumulative loss or restricted access to fishing vessels is expected from these projects. For those projects that will have floating foundations (and associated sub-sea infrastructure), it is assumed that fishing will be excluded from these array areas and, therefore, cumulative impacts may arise. These projects include the following: Hywind Scotland; Kincardine; Muir Mhòr; Green Volt; MarramWind; Ossian and Buchan.

#### *Potters*

- 13.13.3.3 This receptor group comprises <10 m vessels that do not fish within the OAA and therefore, there will be **No Cumulative Impact** on these vessels via exclusion from this area and via exclusion from other projects.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.13.3.4 This receptor group comprises <10 m vessels that do not fish within the OAA and therefore, there will be **No Cumulative Impact** on these vessels via exclusion from this area and via exclusion from other projects.

#### *Scallop Dredgers*

- 13.13.3.5 Even though this receptor group comprises vessels of a size capable of fishing within the OAA, the project-only assessment concluded a **Negligible** impact from loss or reduced access, due to the fact that the OAA was not actively fished by this group. Therefore, will be **No Cumulative Impact** on these vessels via exclusion from this area, either alone or cumulatively via exclusion from other projects.

### *Otter Trawls*

- 13.13.3.6 Even though vessels from this receptor group do currently fish within the OAA for the Salamander Project, the Project-only assessment concluded a **Negligible** impact on this receptor group due to the **Low** sensitivity of the receptor and **Low** magnitude of impact.
- 13.13.3.7 These vessels are more wide-ranging than some of the other receptor groups, therefore, scope exists for cumulative impacts via loss of access to multiple other offshore wind farm arrays in this region.
- 13.13.3.8 The sensitivity of this receptor group is judged to be **Low** as it has moderate spatial tolerance due to the ability to fish numerous fishing grounds. The magnitude of this cumulative impact is judged to also be **Low** as even though these vessels may be excluded from multiple offshore wind farm array areas, the area lost is still predicted to only result in a small (5 – 10%) reduction in annual value of landings. This is due to the large amount of sea area still available to this receptor group.
- 13.13.3.9 Therefore, the **Low** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

### *Pelagic Trawls*

- 13.13.3.10 This receptor group comprises vessels that do not typically fish within the OAA and therefore, there will be **No Cumulative Impact** on these vessels via exclusion from this area or cumulatively via exclusion from other projects.

### **Displacement of Fishing Activity into Other Areas**

- 13.13.3.11 Should major operation and maintenance related works be required on the Salamander Project during the operational phase, then scope exists for fishing vessels in these areas to be displaced onto adjacent areas for a period of time. Noting that the basis of assessment for Operational phase impacts is that no fishing will be possible within the OAA, then the focus of this assessment is actually works within the Offshore ECC, more specifically export cable repairs/remediation or surveys. If such events coincide with similar operation and maintenance related activities on other offshore wind farms in the Study Area and/or the construction phase of planned offshore wind farms, then vessels displaced from these areas could also need to move onto adjacent grounds, potentially resulting in a cumulative impact.

### *Potters*

- 13.13.3.12 This receptor group comprises <10 m vessels that fish in the nearshore area and any displacement during operation and maintenance works (export cable repair/remediation most likely to affect this group) will be onto grounds immediately adjacent to the works.
- 13.13.3.13 As for the Project-only assessment, the sensitivity of this receptor group is judged to be **Medium**. Determination of magnitude takes account of the low number (e.g. ≤6 cable repair and replacement events) of Offshore ECC operation and maintenance events expected to be required over the Salamander Project lifetime (≤35 years). In addition, it is considered unlikely that all of these would occur within the nearshore area where potters operate (i.e. landwards of the 12 nm limit). As such, it is judged that magnitude will remain in line with that assessed for Project effects alone (**Negligible**), even with consideration of construction and operation and maintenance activities on multiple other offshore wind farm cable routes in

the nearshore areas, including Green Volt, Cenos, MarramWind and Muir Mhòr, as well as the NorthConnect interconnector.

- 13.13.3.14 Therefore, the **Medium** sensitivity and **Negligible** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.13.3.15 This receptor group is more wide-ranging than the potters and therefore, greater scope exists for these vessels to interact with vessels displaced from other offshore wind farm projects during construction and/or major operation and maintenance works.

- 13.13.3.16 As for the Project-only assessment, the sensitivity of this receptor group is judged to be **Low**. Determination of magnitude takes account of the low number ( $\leq 6$ ) of operation and maintenance events expected to be required in the Offshore ECC over the Salamander Project lifetime ( $\leq 35$  years). In addition, it is considered unlikely that all of these would occur within the nearshore area where this receptor operates (i.e. landwards of the 12 nm limit). Assessment of project effects alone recognised that as mobile fisheries have been assumed to be displaced from the OAA, this introduces potential for an indirect positive effect on handliners and gear using hooks as the OAA may act as a refuge for other fish species, potentially enhancing fish stocks. In view of this, it was determined that impact magnitude would be low (beneficial). In alignment with the assessment presented herein for potters, it is considered that the low number of Offshore ECC operation and maintenance events expected and the low likelihood that all of these would occur within the nearshore area where handliners operate (i.e. landwards of the 12 nm limit) mean that magnitude will remain in line with that assessed for Project effects alone (**Low beneficial**). This conclusion remains even with consideration of construction and operation and maintenance activities on multiple other offshore wind farm cable routes in the nearshore areas, including Green Volt, Cenos, MarramWind and Muir Mhòr, as well as the NorthConnect interconnector. Interaction between vessels displaced from projects >25 km from the Salamander Project and this receptor group is judged to be minimal, as this receptor group is predominantly made up of smaller vessels with relatively limited range.

- 13.13.3.17 Therefore, the **Low** sensitivity and **Low (beneficial)** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Scallop Dredgers*

- 13.13.3.18 This receptor group is more wide-ranging than both the potters and handliners, therefore, greater scope exists for these vessels to interact with vessels displaced from other offshore wind farm projects during construction and/or major operation and maintenance works.

- 13.13.3.19 However, it was noted for Project effects alone that review of baseline data indicated that scallop dredging does not occur within the OAA. The site location has also been refined to avoid high intensity fishing areas based on data provided by the SFF. Therefore, there is no potential for scallop vessels to be displaced, and therefore no interactions with vessels displaced from other offshore wind farms. As such, it is considered there will be no displaced scallop fishing vessels from the OAA as a result of permanent Project infrastructure.

- 13.13.3.20 As for the Project-only assessment, the sensitivity of this receptor group is judged to be **Low**. With respect to magnitude of impact, this is judged to increase from the Project-only assessment (**Low**) to **Medium**, as scope exists for displacement of other vessels (various gear types) to occur from multiple other offshore wind farm cable routes in the nearshore areas, including Green Volt, Cenos, MarramWind and Muir Mhòr,

as well as the NorthConnect interconnector. There is also potential for cumulative displacement from the array areas of multiple floating wind farms, including Hywind and MarramWind. Interaction between vessels displaced from fixed foundation projects >25 km from the Salamander Project and this receptor group will potentially occur, but this receptor group is nomadic in nature and used to working a range of grounds across large areas of sea. Therefore, whilst an increased magnitude of impact is predicted, this is not judged to result in a major issue for these vessels.

- 13.13.3.21 Therefore, the **Low** sensitivity and **Medium** magnitude result in a **Minor** cumulative impact, which is **Not Significant** in EIA terms.

#### *Otter Trawls*

- 13.13.3.22 As for scallop dredgers, this receptor group is more wide-ranging than both the potters and handliners, therefore, greater scope exists for these vessels to interact with vessels displaced from other offshore wind farm projects during construction and/or major operation and maintenance works.

- 13.13.3.23 It was noted for Project effects alone that this receptor group will be unable to resume fishing activities during the operation and maintenance phase within the OAA due to presence of floating platforms and mooring lines. This is supported by consultation feedback which indicates this receptor group expects to avoid fishing within the OAA (33.25 km<sup>2</sup>) during the operation and maintenance phase.

- 13.13.3.24 As for the Project-only assessment, the sensitivity of this receptor group is judged to be **Low**. With respect to magnitude of impact, this is judged to increase from the Project-only assessment (low) to **Medium**, as scope exists for displacement of other vessels (various gear types) to occur from multiple other offshore cable routes in the nearshore areas, including Green Volt, Cenos, MarramWind and Muir Mhòr, as well as the NorthConnect interconnector. There is also potential for cumulative displacement from the array areas of multiple floating wind farms, including Hywind. Interaction between vessels displaced from projects >25 km from the Salamander Project and this receptor group will also potentially occur, but this receptor group is nomadic in nature and used to working a range of grounds across large areas of sea. Therefore, whilst an increased magnitude of impact is predicted, this is not judged to result in a major issue for these vessels.

- 13.13.3.25 Therefore, the **Low** sensitivity and **Medium** magnitude result in a **Minor** cumulative impact, which is **Not Significant** in EIA terms.

#### *Pelagic Trawls*

- 13.13.3.26 Consultation feedback indicates this receptor group will avoid fishing within the OAA during the operation and maintenance phase and as such it is assumed that fishing will not continue due to infrastructure presence. However, landings data show that there are extremely low levels of pelagic fishing activity the Offshore Development Area, and this is limited to a small region of the Offshore ECC.

- 13.13.3.27 As for the Project-only assessment, the sensitivity of this receptor group is judged to be **Negligible**. With respect to magnitude of impact, this is judged to increase from the Project-only assessment (negligible) to **Low**, as scope exists for displacement of other vessels (various gear types) to occur from multiple other offshore developments.

- 13.13.3.28 As such, the **Negligible** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

### Interference with Fishing Activity as a Result of Increased Vessel Traffic

13.13.3.29 Potential for cumulative impacts on the key fishing receptor groups exists as a result of increased vessel traffic from multiple projects in the Study Area during the operational phase of the Salamander Project. This vessel traffic will potentially include construction and operation and maintenance vessels from other offshore wind farm projects in the Study Area as well as re-directed commercial shipping and recreational vessels (such as sailing vessels).

#### *Potters*

13.13.3.30 This receptor group comprises <10 m vessels that fish in the nearshore area and any increased vessel traffic generated via other projects in this area, i.e. via cable installation/repairs from projects including Cenoss, NorthConnect, Muir Mhòr, MarramWind and Green Volt, the NorthConnect interconnector, and operation and maintenance activity at nearby (<25 km) OWF array sites, i.e. Hywind, will potentially interfere with the fishing activity of this receptor group.

13.13.3.31 As for the Project-only assessment, the sensitivity of this receptor group to this potential impact is judged to be **Medium**. With respect to magnitude of impact, this is judged to increase from the Project-only assessment (Negligible) to **Low**, as scope exists for significant increases in vessel traffic in the nearshore areas where these potters are active. This could manifest by damage to static gear (pots/creels) by vessels in transit and not aware of the presence of such gear.

13.13.3.32 Therefore, the **Medium** sensitivity and **Low** magnitude result in a **Minor** cumulative impact, which is **Not Significant** in EIA terms.

#### *Handliners and Fishers Using Gear with Hooks*

13.13.3.33 This receptor group is more wide-ranging than the potters and therefore, greater scope exists for these vessels to interact with the increased number of vessels active in the Study Area (vessels associated with other offshore wind farm projects and/or diverted shipping/recreational vessels). However, these vessels are more able to work around other vessels than the potters.

13.13.3.34 As for the Project-only assessment, the sensitivity of this receptor group to this impact is judged to be **Low**. With respect to magnitude of impact, this is judged to increase from the Project-only assessment (Negligible) to **Low**, as scope exists for significant increases in vessel traffic due to multiple other offshore cable routes in the nearshore areas, including Green Volt, Cenoss, MarramWind and Muir Mhòr, the NorthConnect interconnector, and operation and maintenance activity at nearby OWF array sites, i.e. Hywind. Interaction between vessels displaced from projects >25 km from the Salamander Project and this receptor group is judged to be minimal, as this receptor group is predominantly made up of smaller vessels with relatively limited range.

13.13.3.35 Therefore, the **Low** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Scallop Dredgers*

13.13.3.36 This receptor group is more wide-ranging than both the potters and handliners, therefore, greater scope exists for these vessels to interact with the increased vessel traffic that may arise from other offshore wind farm projects during construction and/or major operation and maintenance works.

13.13.3.37 As for the Project-only assessment, the sensitivity of this receptor group to this impact is judged to be **Negligible**. With respect to magnitude of impact, this is judged to increase from the Project-only assessment (Negligible) to **Low**, as scope exists for significant increases in vessel traffic due to multiple other offshore wind farm cable routes in the nearshore areas, including Green Volt, Cenos, MarramWind and Muir Mhòr, NorthConnect interconnector and operation and maintenance activity at nearby OWF array sites, i.e. Hywind. Interaction between vessels displaced from projects >25 km from the Salamander Project and this receptor group will potentially occur, but this receptor group is nomadic in nature and used to working a range of grounds across large areas of sea. Therefore, whilst an increased magnitude of impact is predicted, this is not judged to result in a major issue for these vessels.

13.13.3.38 Therefore, the **Negligible** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Otter Trawls*

13.13.3.39 As for scallop dredgers, this receptor group is more wide-ranging than both the potters and handliners, therefore, greater scope exists for these vessels to interact with the increased vessel traffic associated with other offshore wind farm projects in the Study Area.

13.13.3.40 As for the Project-only assessment, the sensitivity of this receptor group to this impact is judged to be **Negligible**. With respect to magnitude of impact, this is judged to increase from the Project-only assessment (Negligible) to **Low**, as scope exists for significant increases in vessel traffic due to multiple other offshore wind farm cable routes in the nearshore areas, including Green Volt, Cenos, MarramWind and Muir Mhòr, NorthConnect interconnector and operation and maintenance activity at nearby OWF array sites, i.e. Hywind. Interaction between vessels displaced from projects >25 km from the Salamander Project and this receptor group will potentially occur, but this receptor group is nomadic in nature and used to working a range of grounds across large areas of sea. Therefore, whilst an increased magnitude of impact is predicted, this is not judged to result in a major issue for these vessels.

13.13.3.41 Therefore, the **Negligible** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Pelagic Trawls*

13.13.3.42 As above for otter trawls, therefore the **Negligible** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### **Increased Steaming Times**

13.13.3.43 Due to the high-level of activity in this Study Area over the operational phase of the Salamander Project, from vessels undertaking operation and maintenance activities on the project, plus construction and/or operation and maintenance vessels from numerous other projects in the region, it is expected that there will be a range of safety and/or voluntary safety zones in place in this area. All these have the potential to require vessels to take alternative (longer) routes in order to avoid them. This in turn may result in increased fuel costs/reduced fishing time.

#### *Potters*

13.13.3.44 The sensitivity of potters to this impact is judged to be **Low**. The Project-only magnitude of impact was judged to be negligible but due to the greater potential for increased steaming time via the cumulative



impact of other projects close to the Salamander Project, i.e. Green Volt, Cenos, MarramWind and Muir Mhòr, the magnitude is predicted to increase to **Low**.

- 13.13.3.45 Therefore, the **Low** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.13.3.46 The sensitivity of handliners to this impact is judged to be **Low**. The Project-only magnitude of impact was judged to be negligible but due to the greater potential for increased steaming time via the cumulative impact of other projects close to the Salamander Project, i.e. Green Volt, Cenos, MarramWind and Muir Mhòr, the magnitude is predicted to increase to **Low**.

- 13.13.3.47 Therefore, the **Low** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Scallop Dredgers*

- 13.13.3.48 The sensitivity of scallop dredgers to this impact is judged to be **Negligible** as they are a mobile, nomadic fleet. The Project-only magnitude of impact was judged to be negligible but due to the greater potential for increased steaming time via the cumulative impact of other projects close Salamander Project, i.e. Green Volt, Cenos, MarramWind and Muir Mhòr, the magnitude is predicted to increase to **Low**.

- 13.13.3.49 Therefore, the **Negligible** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Otter Trawls*

- 13.13.3.50 The sensitivity of otter trawls to this impact is judged to be **Negligible** as they are a mobile fleet that fishes a range of grounds. The Project-only magnitude of impact was judged to be negligible but due to the greater potential for increased steaming time via the cumulative impact of other projects close to the Salamander Project, i.e. Green Volt, Cenos, MarramWind and Muir Mhòr, the magnitude is predicted to increase to **Low**.

- 13.13.3.51 Therefore, the **Negligible** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Pelagic Trawls*

- 13.13.3.52 The sensitivity of pelagic trawls to this impact is judged to be **Negligible** as they are a mobile fleet that fishes a range of grounds. The Project-only magnitude of impact was judged to be negligible but due to the greater potential for increased steaming time via the cumulative impact of other projects close to the Salamander Project, i.e. Green Volt, Cenos, MarramWind and Muir Mhòr, the magnitude is predicted to increase to **Low**.

- 13.13.3.53 Therefore, the **Negligible** sensitivity and **Low** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### **Safety Considerations for Fishing Vessels**

- 13.13.3.54 As per the Project-only assessment, this cumulative impact assessment focusses on the safety (and potential commercial) issues that may arise by fishing activity within the Offshore Development Area during the operational and maintenance phase, i.e. via snagging or entanglement of fishing gear on Project

infrastructure, including any elements related to cable repair/remediation/protection works that may take place during this phase.

- 13.13.3.55 The assessment of potential cumulative impacts (risks) to fishing vessels in transit is assessed in **Volume ER.A.2 Chapter 14: Shipping and Navigation** (as is potential snagging resulting from presence of vessel anchors).

#### *Potters*

- 13.13.3.56 The sensitivity of potters to this impact is judged to be **Low**. The Project-only magnitude of impact was judged to be negligible, based on results of potting trials in the Hywind site. Assuming that for any other offshore wind farms in the region (Green Volt; Cenosis; Marram Wind; Muir Mhòr), potting could also move into the area where mobile gear may be excluded (due to snagging risk) the magnitude is predicted to remain as **Negligible**.
- 13.13.3.57 Therefore, the **Low** sensitivity and **Negligible** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Handliners and Fishers Using Gear with Hooks*

- 13.13.3.58 The sensitivity of handliners to this impact is judged to be **Low**. The Project-only magnitude of impact was judged to be negligible. Assuming that for any other offshore wind farms in the region (Green Volt; Cenosis; Marram Wind; Muir Mhòr), handliners could also move into the area where mobile gear may be excluded (due to snagging risk), the magnitude is predicted to remain as **Negligible**.
- 13.13.3.59 Therefore, the **Low** sensitivity and **Negligible** magnitude result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms.

#### *Scallop Dredgers*

- 13.13.3.60 The sensitivity of scallop dredgers to this impact is judged to be **High**. Based on a review of other EIARs in the region, it has been assumed that mobile gear, including scallop vessels, will be excluded from the offshore arrays of multiple sites during their operational phases. Therefore, with respect to this specific cumulative impact of safety consideration via snagging/entanglement within multiple array areas, the cumulative impact magnitude will be **No Change**.
- 13.13.3.61 With respect to the multiple offshore export cable corridors in this region, even though the offshore export cable(s) will be buried and/or surface-laid with appropriate external cable protection, potential exists for any offshore export cable(s) to become shallow-buried or exposed due to changes in seabed conditions. In the event that cables become exposed in any export cable corridors, temporary safety zones will be implemented to ensure the potential for snagging is mitigated against and relevant stakeholders will be suitably informed through Notice to Mariners and close consultation with commercial fishers. Therefore, the cumulative impact magnitude will be **Low**.
- 13.13.3.62 For this receptor group in offshore arrays, the **High** sensitivity and **No Change** magnitude of impact result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms. For this same group in export cable routes, the **High** sensitivity and **Low** impact magnitude result in a **Minor** cumulative impact, which is **Not Significant** in EIA terms.

### *Otter Trawls*

- 13.13.3.63 The same assumptions and conclusions as presented above for scallop dredgers apply for the otter trawl receptor group. Therefore, for this receptor group in offshore arrays, the **High** sensitivity and **No Change** magnitude of impact result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms. For this same group in export cable routes, the **High** sensitivity and **Low** impact magnitude result in a **Minor** cumulative impact, which is **Not Significant** in EIA terms.

### *Pelagic Trawls*

- 13.13.3.64 This receptor group has a **Medium** sensitivity to this impact. This is less sensitive than scallop dredgers and otter trawlers due to the fact that they deploy fishing gear mid-water (contrasted to scallop dredgers and otter trawls that deploy gear at seabed level).
- 13.13.3.65 With respect to the Offshore Array Area, the magnitude of cumulative impact is judged to be **No Change** as it is assumed that this receptor group will be excluded from the offshore array areas of all offshore wind farms in this region during their operational phases. Therefore, no snagging risk will arise. With respect to the multiple offshore export cable corridors in this region, the cumulative magnitude of impact is judged to increase from Negligible to **Low**.
- 13.13.3.66 For this receptor group in offshore arrays the **Medium** sensitivity and **No Change** magnitude of impact result in a **Negligible** cumulative impact, which is **Not Significant** in EIA terms. In terms of the same group affected by export cable corridors, the **Medium** sensitivity and **Low** magnitude of impact result in a **Minor** significance cumulative impact, which is **Not Significant** in EIA terms.

### **Potential Impacts on Commercially Important Fish and Shellfish Resources**

- 13.13.3.67 Potential exists for the operation and maintenance phase to result in adverse and/or beneficial cumulative effects on commercially important fish and shellfish populations. Effects include behavioural changes or increases/ declines in abundance, which could, therefore, potentially affect the commercial fisheries which target those species. A detailed assessment of potential effects of the Salamander Project on fish and shellfish receptors is presented in **Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology**.
- 13.13.3.68 The fish and shellfish ecology assessment concluded that during the operation and maintenance phase of the Salamander Project, the associated cumulative effects will be of Negligible or Minor significance, which is Not Significant in EIA terms. Therefore, no significant impact is predicted for any commercial fisheries receptor groups as a result of impacts on commercially important fish and shellfish resources. As such, potential impacts on commercially important fish and shellfish resources from operation and maintenance activities is considered **Not Significant** in EIA terms, for all receptor groups.

### **Supply Chain Opportunities for Local Fishing Vessels**

- 13.13.3.69 There is a small potential for cumulative supply chain opportunities for local fishing vessels associated with the operation and maintenance activities of the Offshore Development if the same receptors are affected by supply chain opportunities associated with other projects.
- 13.13.3.70 The operation and maintenance phases of the Salamander Project, cumulatively with other projects, could result in a small number of supply chain opportunities for local fishing vessels, should there be temporal overlap with the construction or operation and maintenance activities of other projects. There are a number of projects, currently or anticipated to be operational prior to Salamander Project completion, such as

Hywind Scotland, European Offshore Wind Deployment Centre, Kincardine, Moray East and Seagreen Alpha and Bravo. Additionally, there are also a number of proposed projects likely to be in operation during the lifetime of the Salamander Project, these include MarramWind, Muir Mhòr, Green Volt Floating Offshore Wind Farm, Cenos Floating Offshore Wind Farm, and NorthConnect, CNSE and EGL2.

- 13.13.3.71 Negligible beneficial effect is concluded for potters or handliners and gears using hooks due to the low suitability to provide marine operation support which would not change for the cumulative assessment. For scallop dredgers, otter and pelagic trawls, the magnitude of the likely cumulative effects during the operation and maintenance phase is small, and lower than during construction, as the supply chain opportunities are likely to be shorter term and more intermittent. As such, the impacts will be of a **Negligible Beneficial** effect as assessed for the Salamander Project alone, which is **Not Significant** in EIA terms.

#### 13.13.4 Decommissioning

- 13.13.4.1 Cumulative effects associated with the decommissioning phase of the Salamander Project are expected to reflect the nature of effects associated with the construction phase, however potential cumulative effects may be of a lower magnitude. For example, if it is determined that assets of the Salamander Project are to be left *in situ*, such as cable protection, there will be a notable reduction in the potential for commercial fisheries disruption.
- 13.13.4.2 This assessment therefore anticipates that the cumulative impacts during decommissioning would be similar to those identified in respect of cumulative impacts during construction, (and operation and maintenance as applicable, where cables are left *in situ*) (as assessed for the Salamander Project in isolation).
- 13.13.4.3 Further assessment of potential impacts associated with decommissioning of the Offshore Development will be assessed as part of a Marine Licence application that will be submitted prior to the commencement of any Project-specific decommissioning works. In addition, a Decommissioning Programme will be submitted to MD-LOT for approval by the Scottish Ministers prior to construction. This document will then be reviewed and updated at various points during the lifetime of the Offshore Development. prior to the commencement of any Project-specific decommissioning works.

### 13.14 Assessment of Impacts Cumulatively with the Onshore Development

- 13.14.1.1 The Onshore Development components are summarised in **Volume ER.A.2, Chapter 4: Project Description**. These Project aspects have been considered in relation to the impacts assessed within this chapter. Due to the nature of the potential impacts identified for commercial fisheries, and following consideration of the onshore project components, it has been concluded there is no pathway for impacts or resultant effects on commercial fisheries receptors cumulatively with the Onshore Development activities due to lack of interaction.

### 13.15 Transboundary Effects

- 13.15.1.1 Transboundary effects are defined as effects that extend into other European Economic Area (EEA) states. These may occur from the Salamander Project alone, or cumulatively with other plans or projects.
- 13.15.1.2 Potential for transboundary effects have been identified for the following two pathways:
- Potential effects on international fishing fleets operating within the Offshore Development Area;
  - Impacts from the Offshore Development on fishing activity outside the UK Exclusive Economic Zone (EEZ).

### 13.15.2 Potential Effects on International Fishing Fleets Operating within the Offshore Development Area

13.15.2.1 Consideration of effects on international fishing fleets operating within the Offshore Development Area have been considered within the assessment of Project alone effects. Non-UK vessels constitute a relatively small portion of commercial fishing activity within the Study Area, and therefore it is considered there will be **Negligible** effects, which is **Not Significant** in EIA terms.

### 13.15.3 Impacts from the Offshore Development on Fishing Activity Outside the UK EEZ

13.15.3.1 Effects on biological resources could occur over a range of 10's of kilometres from the Offshore Development and therefore it is considered there is no potential for effects on the closest non-UK EEZ (Norway, 410 km from the Offshore Development). Transboundary impacts to fish and shellfish ecology have been scoped out, further details regarding impacts on fish species outside the EEZ are presented in **Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology**. Based on this spatial separation, it is considered there will be **Negligible** effects on fishing activity outside the UK EEZ, which is **Not Significant** in EIA terms.

## 13.16 Inter-related Effects

13.16.1.1 The following assessment considers the potential for inter-related effects to arise across the three Project phases (i.e. Project lifetime effects) as well as the interaction of multiple effects on a receptor (i.e. receptor-led effects).

- Project lifetime effects are considered to be effects that occur throughout more than one phase of the project, (Construction, Operation and Maintenance, and Decommissioning) to interact to potentially create a more significant effect on a receptor, than if just assessed in isolation in these three key project stages (e.g. Construction phase, Operation and Maintenance phase and Decommissioning).
- Receptor-led effects involve spatially or temporal interaction of effects, to create inter-related effects on a receptor or receptor group. Receptor-led effects might be short term, temporary or transient effects, or incorporate longer term effects.

13.16.1.2 It is important to note that the inter-related effects assessment considers only effects produced by the offshore elements of the Salamander Project and not from other projects, which are considered within **Section 13.14**.

13.16.1.3 The significance of the individual effects, as determined in **Section 13.11** is presented herein for each receptor group. A descriptive assessment of the scope for these individual effects to interact to create a different or greater effect has then been undertaken. This assessment incorporates qualitative and, where reasonably possible, quantitative assessments. It should be noted that the following assessment does not assign significance of effect for inter-related effects; rather, any inter-related effects that may be of greater significance than the individual effects acting in isolation on a given receptor are identified and discussed. The assessment of impacts arising from construction, operation and decommissioning of the Salamander Project indicates that impacts on receptors addressed in different chapters of the EIAR may potentially further contribute to the impacts assessed on commercial fisheries and vice versa. These are primarily from **Volume ER.A.3, Chapter 10: Fish and Shellfish Ecology** and **Chapter 14: Shipping and Navigation**. The worst-case effects assessed within this chapter take these interactions into account and therefore the assessments are considered conservative and robust.

### 13.16.2 Project Lifetime Effects

13.16.2.1 It is not anticipated that effects on commercial fishing vessels across all phases of the Salamander Project will interact in such a way to result in combined effects of greater significance than the assessment of each individual phase. Although some effects may be considered to be 'long term', the expected rapid recovery of affected receptors ensures that there is no potential for interphase effect interaction.

### 13.16.3 Receptor-led Effects

13.16.3.1 There is potential for an inter-related effect from the combination of the loss or restricted access to fishing grounds and the consequent displacement of fishing activity into other areas. This could result in increased gear conflict and pressure on other fishing grounds. During construction, static gear vessels may be required to relocate pots from areas of activity, which could increase intensity of activity in other areas or cause conflict with mobile gear species (e.g. scallop vessels). However, with successful implementation of the embedded mitigation measures outlined in **Section 13.8.3**, and the temporary nature of the works, it is not predicted that there will be any inter-related effect of greater significance than those already assessed in isolation. Considering the measures outlined in **Section 13.8.3** it is anticipated that the appropriately mitigated loss of access will reduce displacement and, therefore, any inter-related effect will not be of greater significance than those assessed in isolation (**Negligible to Minor**).

13.16.3.2 Impacts on commercially important fish and shellfish species from direct habitat loss or disturbance, sediment plumes etc. are assessed in **Volume ER.A.3; Chapter 10: Fish and Shellfish Ecology**.

13.16.3.3 Increased collision and allision risk to commercial fishing vessels has been considered in **Volume ER.A.3; Chapter 14: Shipping and Navigation**.

## 13.17 Conclusion and Summary

13.17.1.1 This chapter has provided a baseline characterisation of commercial fisheries within the Offshore Development Area and has investigated the potential effects arising from the construction, operation and maintenance, and decommissioning phases of the Offshore Development. The potential effects considered within this chapter have been informed by existing policy and guidance, the Scoping Opinion and stakeholder consultation.

13.17.1.2 The assessment has been undertaken in three stages. These are:

- The determination of the baseline for commercial fisheries (including potential natural variation across the Salamander Project's lifetime);
- The determination of the realistic worst-case scenario of the Offshore Development on commercial fisheries receptors from **Volume ER.A.2, Chapter 4: Project Description**; and
- Assessment of changes to commercial fisheries arising from the realistic worst-case scenario for the Offshore Development, as well as in conjunction with other projects built, consented or in the application or scoping stages.

13.17.1.3 The Offshore Development is located in the Central North Sea, approximately 35 km east of Peterhead. The Commercial Fisheries Study Area is characterised by a range of gear types that are used to target a variety of ecologically and commercially valuable species, including shellfish, demersal and pelagic species. The gear type utilised by fishers is observed to be spatially variable relative to the marine environment and the size of the vessel, such as passive methods include pots and traps and gears using hooks, otter trawls or scallop dredges and pelagic seines.

- 13.17.1.4 These receptor groups were used to assess the potential effects associated with the Offshore Development. A full summary of the results of the impact assessment is presented in **Table 13.30**, including the requirement for mitigation and consequent residual effects. All effects associated with the Offshore Development alone were assessed as having negligible to **Minor** effects, with some beneficial impacts on certain receptors, which are considered **Not Significant** in EIA terms.
- 13.17.1.5 Effects associated with the Offshore Development cumulatively with other planned projects were assessed as having a range of effects, including some moderate beneficial to moderate effects (which are significant in EIA terms). In instances where moderate effects were identified it is proposed that additional mitigation is applied to mitigate these potential cumulative impacts to a level that is non-significant in EIA terms, i.e. minor or less. This will entail the Salamander Project working closely with the other developers active in this region to develop a coordinated approach to works in the nearshore region of the Offshore ECC and fisheries liaison that seeks to minimise disruption to this receptor group.
- 13.17.1.6 More specifically, this will entail development of a joint Fisheries Management and Mitigation Strategy (FMMS), that covers these multiple projects so that local fishers have clarity on the programme of works across multiple projects; key contacts within each individual project; which operational measures will be implemented, i.e. frequency of NtMs; use of OFLOS; use of safety zones. Successful implementation of these additional mitigation measures is predicted to reduce these impacts to **Minor**, which is **Not Significant** in EIA terms.
- 13.17.1.7 Potential transboundary effects were identified due to potential effects on international fishing fleets operating within the Offshore Development Area and impacts from the Offshore Development on fishing activity outside the UK EEZ. However, both of these were determined to result in **Negligible** effects, which is **Not Significant** in EIA terms.
- 13.17.1.8 The inter-related effects are not likely to result in a greater effect significance above that assessed for effects alone due to the small scale of the Offshore Development.

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