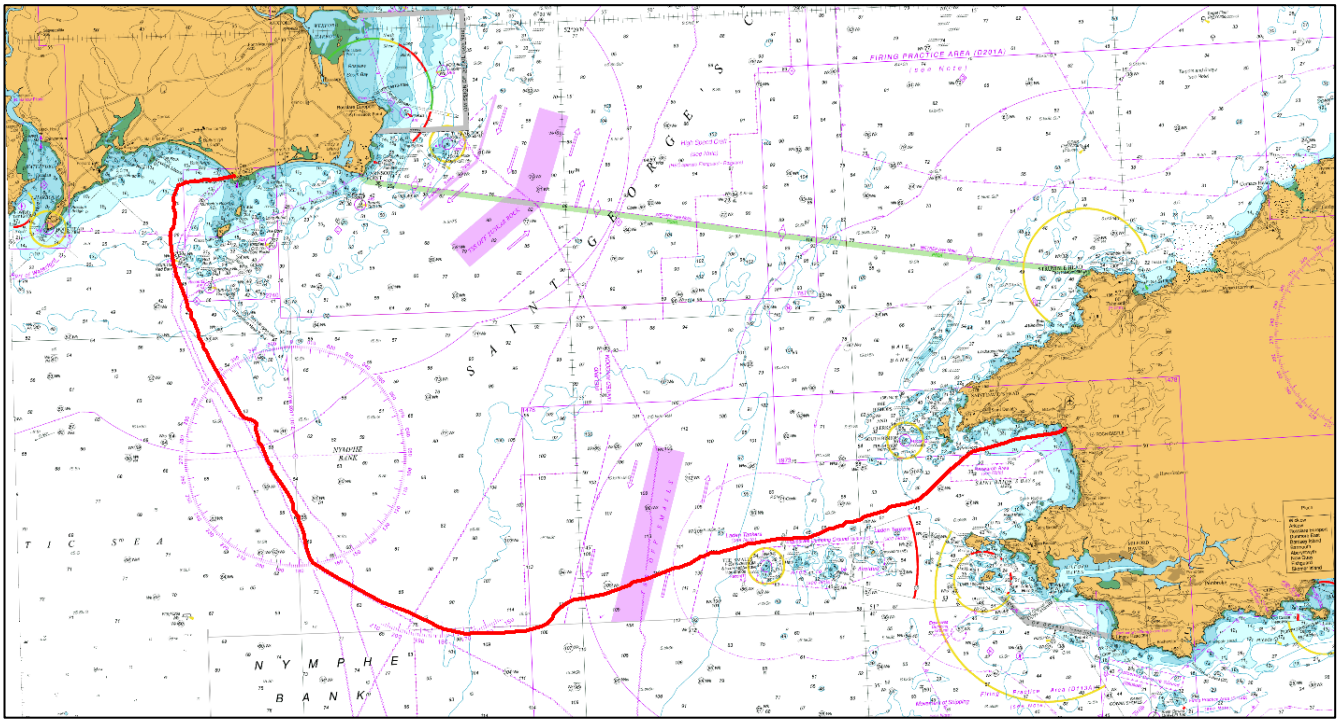
BEAUFORT CABLE SYSTEM



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

MDM

SUBSEA SOLUTIONS, CONNECTED COMMUNITIES

DOCUMENT CONTROL SHEET

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

1.1 Purpose of the CEMP

This Construction Environmental Management Plan (CEMP) supports the consent application for the Beaufort Cable System, a new high capacity fibreoptic cable system linking Kilmore Quay, County Wexford to the UK. The Beaufort project is being developed by Amazon MCS Ireland Limited ('the Developer'). The Beaufort system will be jointly developed and operated with Microsoft to provide next generation diverse connectivity between Ireland and the UK with onward connectivity to Continental Europe. When fully operational, the cable will support high quality, robust and resilient access to international telecommunications networks - a key driver in social, economic and industrial growth, supporting the development of the region and of Ireland as a whole as outlined in the National Marine Planning Framework.

This CEMP provides an overview of the environmental impacts and mitigations resulting from the installation of the Beaufort Cable System between the Irish 12 nautical mile (12nm) limit and the boundary of the Irish Exclusive Economic Zone (EEZ).

1.2 Scope of the CEMP

The CEMP provides an overarching framework for environmental management during the construction/installation of the Beaufort Cable System, to ensure that any adverse effects on the environment and local communities are minimised. It is anticipated that the development and implementation of a CEMP will form a condition of any consent granted. The CEMP has the following primary objectives:

1. To ensure environmental consent requirements relevant to the construction of the Beaufort are implemented in full to manage and to mitigate environmental effects as identified within the EcIA, Natura Impact Statement (NIS) and other supporting documents.
2. To ensure compliance with legislative requirements and relevant industry good practice.
3. To provide guidance and ensure consistency in approach and performance of environmental management across all project personnel and contractors during the installation of the Beaufort cable system.
4. To define environmental principles and standards and provide a framework for compliance monitoring and inspection and to ensure the agreed environmental aims are being met.
5. To ensure a prompt response to any non-compliance with legislative requirements, including reporting, remediation and any additional mitigation measures required.

1.3 Implementation of the CEMP

Key to the implementation of the CEMP is the delegation of responsibility for the CEMP to the relevant appointed contractors, who will regularly liaise with and update the Developer on all environmental issues relating to the Beaufort Project during the construction/installation phase. As part of the appointment of contractors and agreement of contracts, the Developer will determine the lines of communication for environmental compliance with the local authorities and relevant stakeholders.

The appointed contractors will be responsible for developing final construction methods and installation procedures for the Beaufort Project. Contractors will ensure that all relevant environmental and maritime legislation is complied with, that all necessary licences and permissions are obtained, that all primary (i.e. designed in) mitigation measures are applied and that good working practices are adhered to, at all times, to minimise risks to the environment.

Contractors will be responsible for implementing the CEMP through contractual agreements with the Developer. Contractors will also be required to complete their own project Environmental Management Plans (EMPs) that are specific to individual work packages. Contractors are likely to have internal management system requirements and contractor EMP templates, and therefore the format of these plans may differ from contractor to contractor, but in each case, these must be compliant with this CEMP.

All project personnel are required to ensure compliance with the requirements of this CEMP (and subsequent revisions thereof) and are responsible for ensuring that their actions constitute good environmental practice. All personnel are also encouraged to provide feedback and suggestions for improvements to ensure effective environmental management of all construction activities. A code of conduct will also be developed which will ensure that all project personnel are authorised to stop work if works are observed to be unsafe, or there is a danger to life or the environment.

1.4 Revisions to the CEMP

The CEMP is considered to be a 'live' document and will be reviewed on a regular basis to allow any changes to the construction programme, operations, or unforeseen issues to be incorporated at any stage, and as deemed necessary by the Developer, their agents or relevant authorities. The CEMP will also be subject to regular review to address, for example:

- Any conditions stipulated in the planning consents
- Any requirements/issues highlighted through consultation prior to construction.
- Any changes/updates to best practice and best available techniques at the time of construction.
- To ensure it incorporates the findings of any pre-construction surveys.

2. PROJECT OVERVIEW

2.1 Project Background

Amazon MCS Ireland Limited is planning to construct a new subsea fibre optic cable system to replace an out-of-service cable and upgrade connectivity in the southern sea corridor between Ireland and the UK. The planned cable will extend from Kilmore Quay on the southeast coast of Wexford in Ireland to Newgale, Pembrokeshire on the southwest coast of Wales. The overall scheme is referred to as the Beaufort Cable System and the route configuration is shown in *Figure 1.*

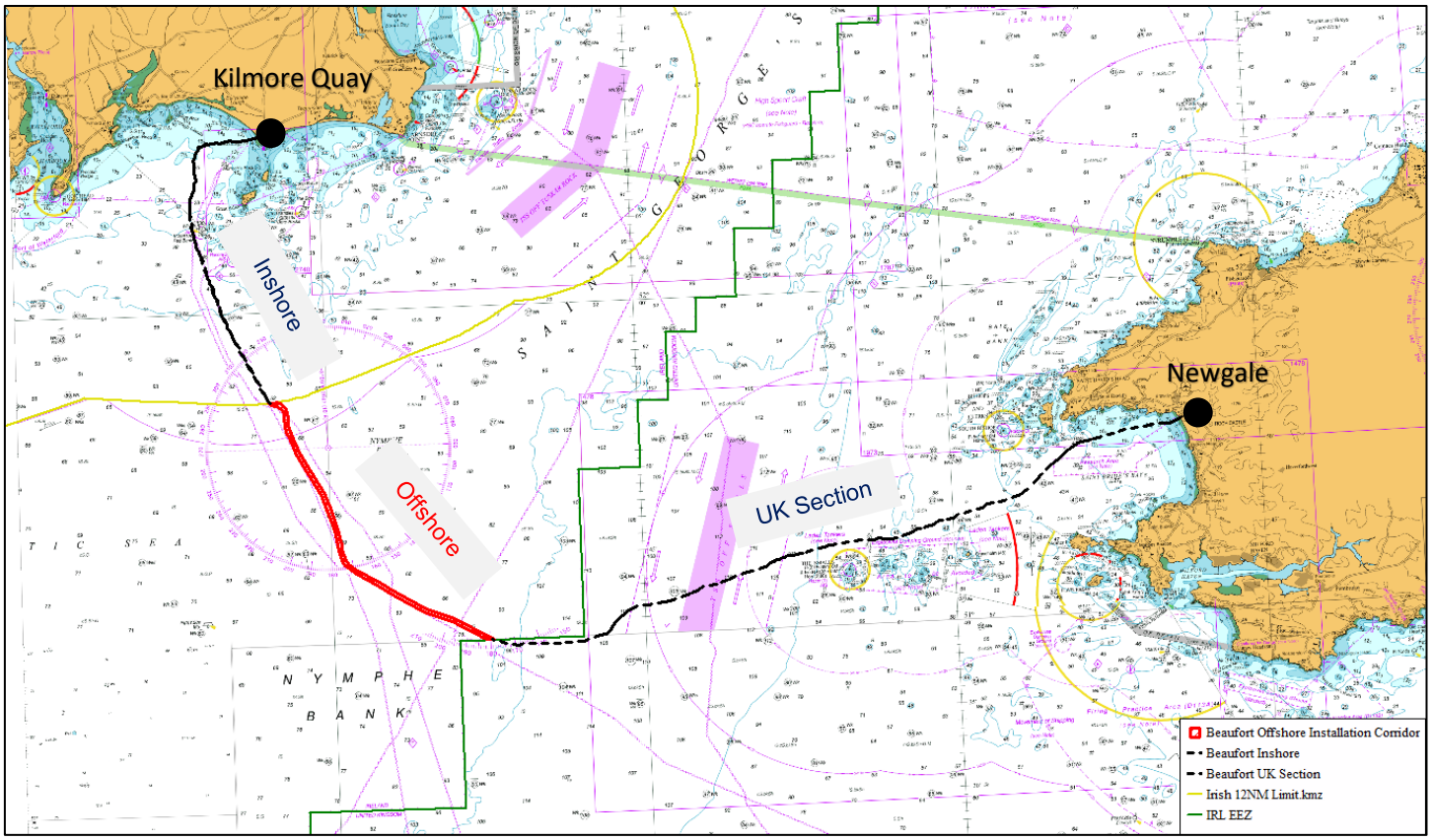


Figure 1: Beaufort Cable System

The planned system is comprised of three segments which are defined as follows:
Inshore:

- Kilmore Quay to Irish 12nm Limit - Granted permission under Foreshore License FS007361 on 29/11/2023.
- Offshore: Irish 12nm Limit to Irish EEZ Boundary – Granted a Maritime Area Consent (MAC240030) by the Maritime Area Regulatory Authority (MARA) in late 2025. This segment will be the primary focus of this report.
- UK Section: EEZ Boundary to Newgale – – An application for a Marine Licence to install the Beaufort cable in UK waters has been submitted to Natural Resources Wales (NRW), ref: CML2606.

The landfall duct at Kilmore Quay, Wexford has been granted planning permission by Wexford County Council on 25/03/2025 – Application Reference Number: 20250330.

The Beaufort Cable installation corridor between the Irish 12nm limit and the EEZ boundary, as licensed under MAC240030, is 38.5 km in length, 400m width with a total area of approximately 15.38 km^2. A map of this installation corridor is shown in *Figure 2* and a Route Position List (RPL) with corresponding coordinates is presented in *Table 1*

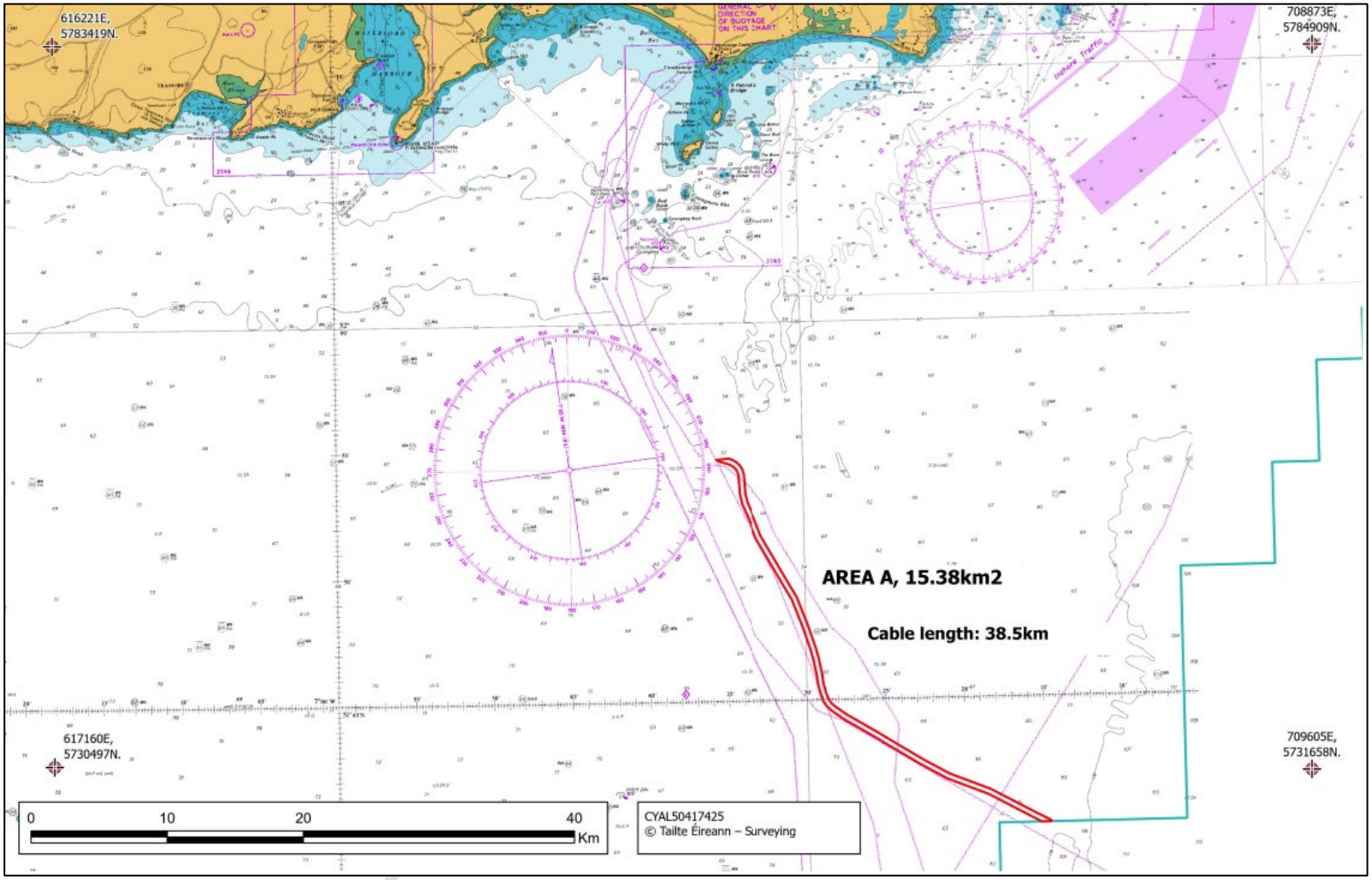


Figure 2: The Beaufort Cable Installation Corridor between Irish 12nm Limit and EEZ Boundary

Beaufort IRL Offshore Installation Corridor RPL			
ID	LATITUDE	LONGITUDE	COMMENT
1	51° 54' 35.3826" N	6° 35' 37.2180" W	IRL 12NM Limit
2	51° 54' 36.2943" N	6° 35' 21.7787" W	IRL 12NM Limit
3	51° 54' 37.7038" N	6° 35' 01.6170" W	IRL 12NM Limit
4	51° 54' 38.6017" N	6° 34' 50.6195" W	IRL 12NM Limit
5	51° 54' 34.5993" N	6° 34' 34.7132" W	
6	51° 54' 28.6861" N	6° 34' 19.0584" W	
7	51° 54' 20.9485" N	6° 34' 06.7819" W	
8	51° 54' 11.1139" N	6° 33' 57.6221" W	
9	51° 53' 59.5495" N	6° 33' 52.4391" W	
10	51° 53' 45.6884" N	6° 33' 51.0768" W	
11	51° 53' 14.1252" N	6° 33' 47.9203" W	
12	51° 52' 53.7233" N	6° 33' 40.7627" W	
13	51° 52' 37.1581" N	6° 33' 29.3758" W	
14	51° 52' 10.7185" N	6° 33' 11.4243" W	
15	51° 51' 33.3104" N	6° 32' 49.4773" W	
16	51° 49' 36.5792" N	6° 31' 03.5939" W	
17	51° 49' 05.5611" N	6° 30' 35.0001" W	
18	51° 48' 02.9995" N	6° 29' 57.0942" W	

19	51° 47' 06.0227" N	6° 29' 27.1952" W	
20	51° 46' 41.1144" N	6° 29' 16.3548" W	
21	51° 46' 00.1548" N	6° 29' 03.4950" W	
22	51° 45' 40.7520" N	6° 28' 59.8563" W	
23	51° 45' 21.0376" N	6° 28' 52.2292" W	
24	51° 45' 19.8445" N	6° 28' 51.7652" W	
25	51° 45' 02.1295" N	6° 28' 41.4627" W	
26	51° 44' 52.8960" N	6° 28' 31.8361" W	
27	51° 44' 44.7599" N	6° 28' 17.6373" W	
28	51° 44' 24.8686" N	6° 27' 34.0552" W	
29	51° 43' 39.8560" N	6° 25' 33.8987" W	
30	51° 43' 21.6075" N	6° 24' 47.6985" W	
31	51° 43' 10.3905" N	6° 24' 18.7566" W	
32	51° 42' 34.0198" N	6° 22' 44.9476" W	
33	51° 41' 59.0889" N	6° 21' 05.5635" W	
34	51° 41' 20.2014" N	6° 18' 29.8712" W	
35	51° 41' 04.2676" N	6° 17' 43.2754" W	
36	51° 40' 25.3143" N	6° 15' 49.1535" W	
37	51° 40' 22.5346" N	6° 15' 41.4168" W	
38	51° 40' 02.7628" N	6° 14' 41.4159" W	

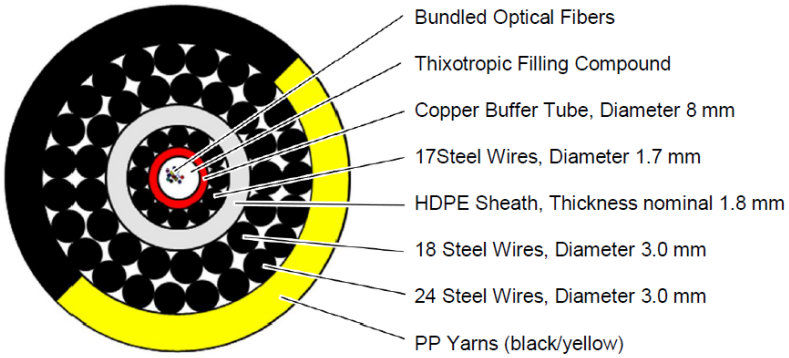
39	51° 40' 00.1217" N	6° 14' 43.6674" W	IRL EEZ
40	51° 40' 00.1071" N	6° 15' 17.8010" W	IRL EEZ
41	51° 40' 11.2094" N	6° 15' 51.4998" W	
42	51° 40' 14.0380" N	6° 15' 59.3727" W	
43	51° 40' 52.9247" N	6° 17' 53.3022" W	
44	51° 41' 08.4850" N	6° 18' 38.8063" W	
45	51° 41' 47.4001" N	6° 21' 14.6130" W	
46	51° 42' 22.8923" N	6° 22' 55.5957" W	
47	51° 42' 59.4103" N	6° 24' 29.7868" W	
48	51° 43' 10.6569" N	6° 24' 58.8060" W	
49	51° 43' 28.8536" N	6° 25' 44.8762" W	
50	51° 44' 14.0909" N	6° 27' 45.6363" W	
51	51° 44' 34.7597" N	6° 28' 30.9234" W	
52	51° 44' 44.4933" N	6° 28' 47.9111" W	
53	51° 44' 56.3414" N	6° 29' 00.2648" W	
54	51° 45' 16.1174" N	6° 29' 11.7682" W	
55	51° 45' 18.0082" N	6° 29' 12.5038" W	
56	51° 45' 38.4847" N	6° 29' 20.4284" W	
57	51° 45' 58.1664" N	6° 29' 24.1218" W	
58	51° 46' 38.1865" N	6° 29' 36.6917" W	

59	51° 47' 02.3312" N	6° 29' 47.2027" W	
60	51° 47' 58.7194" N	6° 30' 16.7997" W	
61	51° 49' 00.0404" N	6° 30' 53.9611" W	
62	51° 49' 30.2000" N	6° 31' 21.7671" W	
63	51° 51' 27.8940" N	6° 33' 08.5376" W	
64	51° 52' 05.9988" N	6° 33' 30.8978" W	
65	51° 52' 32.1171" N	6° 33' 48.6343" W	
66	51° 52' 49.7817" N	6° 34' 00.7791" W	
67	51° 53' 12.3418" N	6° 34' 08.6967" W	
68	51° 53' 44.8955" N	6° 34' 11.9564" W	
69	51° 53' 57.4039" N	6° 34' 13.1874" W	
70	51° 54' 06.0746" N	6° 34' 17.0746" W	
71	51° 54' 13.0597" N	6° 34' 23.5810" W	
72	51° 54' 18.4766" N	6° 34' 32.1761" W	
73	51° 54' 23.0070" N	6° 34' 44.1703" W	
74	51° 54' 26.3966" N	6° 34' 57.6414" W	
75	51° 54' 29.8986" N	6° 35' 18.9298" W	
76	51° 54' 30.3472" N	6° 35' 20.8519" W	
77	51° 54' 35.3826" N	6° 35' 37.2180" W	
78	51° 54' 35.3826" N	6° 35' 37.2180" W	

Table 1: Route Position List – Beaufort Offshore Installation Corridor

2.2 Cable Specification

The NSW MINISUB DA 192 has been chosen for the Beaufort project. The fibre optic cable will be 33mm in diameter and will be “un-repeatered” (i.e. not powered). It is to be an industry-standard cable with the capability to transmit high-speed data and voice via light waves through the 72 optical fibre pairs contained within the core Unit Fibre Structure (UFS). The cable will be double armoured (DA) in Irish waters, and a cut-away section of the cable is shown in *Figure 3*: NSW MINISUB DA 192 Specification.



Schematic drawing (not to scale)

Mechanical Characteristics

Outer diameter	nominal	33	mm
Fiber count	up to	192	Fibers
Weight in air	nominal	3150	kg/km
Weight in seawater	nominal	2550	kg/km
Specific gravity in seawater	nominal	5.2	
Minimum bending radius with load		1000	mm

Figure 3: NSW MINISUB DA 192 Specification

The UFS is the innermost element of the cable and consists of 72 optical fibre pairs embedded in a buffer gel material inside a copper buffer tube. The buffer gel is a thixotropic material that protects the optical fibres from shear stresses associated with movement inside the tube. Ultra-high strength steel wires are helically wrapped around the UFS and together they act as a pressure vessel that protects the UFS from stresses greater or equal to 100 MPa. The interstices between the steel wires are filled with a hydrophobic elastomeric water-blocking material which resists longitudinal water ingress. A thin layer of ethylene-acrylic and copolymer plastic resin and a thick layer of polyethylene insulating jacket are co-extruded over the copper sheath. This HDPE sheath provides insulation, abrasion resistance and corrosion protection.

The double armour, consisting of two layers of galvanised wire wrapped around the cable, is coated with hot-blown asphalt and wound with polypropylene yarn. The finished DA Cable has an outer diameter of 33 mm.

2.3 Timeline and Duration of Works

The intention is to commence the cable installation in Spring 2027 accounting for vessel availability, the overall cable installation programme, seasonality and suitable weather windows. The exact mobilisation dates will not be known until closer to the time and once all permits and authorisations are in place in Ireland and the UK. It is anticipated that the main lay operations within the offshore area between the Irish 12nm limit and the EEZ will take less than 2 weeks in total and will be completed over a 2-month period.

3. REGULATORY AND PLANNING CONTEXT

3.1 Statement of Consistency with the National Marine Planning Framework (NMPF)

The NMPF details how marine-based human activities will interact with each other and the marine environment. It is the marine equivalent of the National Planning Framework. It enables the Irish Government to "direct decision makers, users and stakeholders towards strategic, plan-led and efficient use of our marine resources" (Department of Housing, Local Government and Heritage, 2021). It brings together the various EU Directives mentioned previously to set a clear direction for managing our seas. The project's adherence to EU Directives, coupled with the localised and temporary nature of the work, ensures that it will be consistent with the NMPF.

As stated in the Telecommunications chapter of the National Marine Planning Framework (March 2021), guaranteeing existing and future international telecommunications connectivity is critically important to support the future needs of society and enterprise in Ireland. The value of the digital economy in Ireland is estimated at €12.3bn or 6% of GDP and is expected to grow significantly over the coming years. In an increasingly interconnected world, continued investment in sustainable telecommunications connectivity will be critical to ensuring that Ireland can address digital related challenges, enabling citizens to participate and benefit fully from a more integrated digital single market, improving skills, reducing the digital divide, fostering and strengthening innovation, and providing better job opportunities.

Recent developments at European level, including an initiative led by the Portuguese presidency – the "European Data-Gateway Platforms Strategy" as part of "Shaping Europe's Digital Future" outlines an increased ambition to further strengthen the international connectivity of the EU including in respect of telecommunications and subsea telecommunications connectivity. '2030 Digital Compass: The European way for the Digital Decade' also sets a vision, targets, and avenues for a successful digital transformation of Europe by 2030. Europe's digital leadership and global competitiveness is dependent on strong internal and external connectivity. In that regard, the Commission highlights the importance of improving connectivity with external partners (such as the UK) including via subsea cables.

3.2 Statement of Consistency with the Marine Strategy Framework Directive

The Marine Strategy Framework Directive (MSFD) is European legislation, which aims to protect the marine environment. It requires the application of an ecosystem-based approach to the management of human activities, enabling a sustainable use of marine goods and services.

To implement the MSFD, Ireland is required to:

- Describe what they consider is a clean, healthy, and productive sea.
- Monitor and assess the quality of their seas against Good Environmental Status
- Ensure they take appropriate action by 2020 to maintain or achieve Good Environmental Status.

This process started in 2012, with a review every six years. Marine Strategy Framework Directive habitat mapping was consulted during the preparation of the Ecological Impact Assessment Report (ECIA) for this application.

4. ENVIRONMENTAL MANAGEMENT FRAMEWORK

This section of the CEMP sets out an overview of the anticipated Environmental Management framework, roles and responsibilities and reporting procedures that will be employed by the Developer to manage environmental risks during the construction of the. Installation/construction of the Beaufort Cable System.

4.1 Environmental Roles and Responsibilities

Anticipated roles and responsibilities of key personnel relevant to the implementation, management and monitoring of the CEMP are set out in the RACI matrix in *Table 2*. Roles and responsibilities will be subject to specific contractual agreements upon appointment of contractors and any additional/further appointments required as conditions of consent.

Procedural Responsibilities. R - Responsible for the action A - Accountable for the action C - Consulted during the action I - Informed after action completion	Project Owner	Project Director	Project Managers	Environmental Advisor	Fisheries Liaison Officer	Project Archaeologist	HSSE Manager	Contractors	Project Personnel
Ensures adequate resources and budgetary support is provided for overall implementation of the CEMP	A	R	R						
Ensures the implementation of the CEMP and relevant environmental monitoring programs required under the consents		A	C	R	C	C	R	R	
Develops and implements objectives and targets for the Beaufort Project Environmental Management System ensuring the goals of the CEMP are achieved and maintained.	A	R	C	R	C	C	R	I	C
Reviews and approves relevant contractor documents from a compliance perspective, including the Contractor EMPs		A	R	R	R	R	R	I	I

Ensures that environmental compliance monitoring is undertaken in accordance with all relevant project Environmental Management Procedures and Plans, monitors changes in legislation, and communicates results to relevant stakeholders including regulatory authorities		A	C	R			R	R	C
Identifies all environmental risks associated with the construction activities, provides specialist input and advice on environmental obligations		A	I	R		R	R	R	C
Informs all contractors of the CEMP, develops suitable training and awareness materials relating to compliance with management plans and consent conditions and disseminates associated documentation as required		A	I	C	R	C	R	C	C
Plans, manages coordinates and monitors contracted works during the construction and commissioning phase until project completion		C	I	C		C	C	A	C
Manages communication between the Beaufort Project and the commercial fishing industry and provision of information relating to the safe operation of fishing activity within and in the vicinity of the offshore development area		A	I	C	R			C	C

Table 2: RACI Matrix for the Implementation of the CEMP

4.2 Contractor Requirements

In undertaking construction of the Beaufort Project, contractors and their sub-contractors will ensure compliance with all relevant environmental and maritime legislation and that all necessary licences and permissions are obtained. The Developer will require that all design embedded mitigation measures and adherence to good working practice is applied by the contractors and their subcontractors throughout the construction phase and the implementation of such measures will be managed by the contractors and monitored by the Developer.

Prior to installation of the Beaufort Cable System, contractors and subcontractors, as appropriate, will be expected to provide Method Statements for required construction activities. Construction activities requiring method statements will as a minimum include, onshore and offshore site preparation works and onshore and offshore installation activities.

Method Statements should contain:

- Location and duration of the activity.
- Work to be undertaken and methods of construction
- Licence and permission requirements
- Plant and materials to be used
- Labour and supervision requirements
- Environmental considerations (including relevant control measures)

All contractors will be required to develop and implement their own EMPs which will be compliant with this CEMP and which will set out roles and responsibilities including communications with the Developer, together with appropriate environmental control measures and monitoring systems to be employed during the construction works.

In undertaking construction of the Beaufort Project, contractors and their sub-contractors, as appropriate, will be expected to produce Risk Assessments for required construction/installation activities. Risk assessments will include as a minimum:

- General site information, including location, grid reference and site plan.
- Hazards identified and risk assessment undertaken including:
- Type or risk
    - Risk rating assessed (High, Medium, Low)
    - Identified control/risk management measures
    - Assessment of residual risk
- Contact details, including HSSE Manager, relevant project personnel, contractors and subcontractors and any third parties such as landowner or regulatory authorities.
- Emergency services contact details and information on nearest welfare facilities.

4.3 Compliance Monitoring & Reporting

Contractors will undertake compliance monitoring of all installation/construction activities and will provide regular reports to the Developer as required. To monitor compliance with relevant management plans and consent conditions, the Developer will utilise several information sources.

These will be reviewed by the appropriate project personnel, as required, to ensure compliance with the CEMP. These are anticipated to include, but are not limited to, the following:

- Contractor Daily Progress Reports, which provide a log of daily activities for the previous 24 hours, including records of inspections undertaken and any environmental incidents/observations
- Contractor Completion Report issued upon completion of the installation, which provides an overview of the following:
    - Any non-compliance events
    - Any environmental incidents and severity
    - Results of construction environmental monitoring
    - Details of Environmental Toolbox talks, or Environmental training given
    - Fuel usage (as appropriate) including any bunkering operations undertaken
- Liaison and correspondence with the Fisheries Liaison Officer (FLO), including FLO Progress Reports, which provides a log of FLO activities and monitoring of compliance with the fisheries management plan.

Data and information sources will be reviewed and updated within the final CEMP, following receipt of planning consent, appointment of the contractor(s) and confirmation of vessels selected.

4.4 Environmental Incidents & Non-Compliance Procedures

It is essential that any environmental incidents that occur are reported and appropriately managed to ensure potential impacts are reduced to a minimum and to decrease the risk of the incident re-occurring. All environmental incidents and near misses must be reported, investigated, and recorded by contractors and communicated to the Developer as soon as possible in line with the requirements outlined the supporting environmental documentation.

Contractors are responsible for identifying and documenting all risks to the environment associated with the Beaufort Project construction/installation activities, ensuring all suitable controls and processes are in place to prevent any environmental incidents or non-compliance with the project consents and ensuring corrective actions are identified and implemented to minimise the risk of a similar incident occurring again. It is anticipated that the following procedures will be followed in the event of an incident occurring:

- The relevant project personnel including the HSSE Manager and relevant Project Managers will be contacted at the earliest opportunity (within 60 minutes by phone or email).
- If required due to the nature of the incident and to safeguard the environment, project personnel will be required to stop works and the area will be made safe.
- The size of the incident will be assessed and determined if it can be controlled by project personnel or if emergency services are required to attend.
- The appropriate authorities will be contacted.
- The HSSE Manager will investigate the incident, and the findings will be sent to the appropriate authorities.
- Appropriate reporting procedures will be followed. An initial incident report will be provided by the contractor to the HSSE Manager within 24 hours, an interim investigation report will be provided within five working days, and a full investigation report will be

provided within 15 days. This will include an assessment of immediate causes, underlying causes, recommendations and a corrective action plan including timescales and responsibilities.

Personnel appointed by the applicable Project Manager will investigate the incident and ensure all mitigation measures are implemented and preventative action is taken. A deadline for closure of the incident will be determined according to the urgency and severity. Where the incident comprises a serious or repeated environmental breach (i.e., regulatory breach) the HSSE Lead shall also request an improvement plan to be developed by the applicable contractor. This shall include identification of root causes, remediation measures, timescales for implementation and those responsible for the close out of the improvement plan.

4.5 Inspections

Contractors will undertake daily inspections of project construction activities and will provide daily progress reports to the Developer. This will include monitoring compliance with the CEMP and contractor EMPs, monitoring environmental control measures and undertaking equipment checks to reduce the risk of any environmental incidents occurring. Designated personnel from the contractor's team will be responsible for preparing and maintaining Daily Progress Reports, and Vessel/Site Daily Activity Logs, as appropriate.

The following checks will be undertaken of project facilities, including offshore vessels, prior to mobilisation:

- Waste management and storage facilities
- Fuel, oil and chemical management and storage facilities
- Hazardous material management and storage facilities
- Environmental incidents and Emergency response procedures
- Spill response kits
- Vessel personal awareness and documentation
- Bunkering facilities and logistics
- Ballast water, invasive species management and antifouling
- Onshore site boundaries, fencing and entrances that adjoin the road network and publicly accessible area

4.6 Communications

Contractors will liaise regularly with the Developer regarding the programme of works, nature of the operations, and methods to be employed to minimise potential environmental impacts during construction. This will include progress meetings and updates, both face to face and virtual, as well as the production and submission of progress reports, including Daily Progress Reports and Vessel Daily Activity Logs, as appropriate.

On appointment of the contractor(s), the Developer will confirm the lines of communication for environmental compliance with the local authorities and relevant stakeholders and agreed reporting procedures will be detailed within the final CEMP.

4.7 Competence, Training & Awareness

All contractors will be responsible for ensuring the competency of their personnel, including subcontractors, to ensure compliance with the CEMP and contractor EMPs, and to ensure the requirements of the project consents are implemented. In order to ensure that environmental awareness and compliance is communicated effectively at the start and throughout the construction works, the CEMP and its contents will be communicated to all project personnel via project inductions. These will be mandatory for all employees, contractors and subcontractors working on the project.

Contractors shall be responsible for identifying the training needs of their personnel to ensure suitably qualified and experienced professionals will be engaged for this purpose. Ongoing training will include site briefings and toolbox talks to equip relevant staff with the necessary level of knowledge on environmental topics.

Contractors will be also required to develop their own site inductions which should include appropriate environmental material relevant to the Beaufort project. Contractors are expected to undertake assurance monitoring of procedures set out within their own EMPs to ensure all personnel understand their roles and responsibilities in the event of an incident or non-compliance.

5. OFFSHORE ENVIRONMENTAL RISK MANAGEMENT & COMPLIANCE

The following sections provide an overview of the approach to the management of offshore environmental sensitivities during construction/installation of the Beaufort Cable System. It also provides an outline of the proposed mitigation measures which will be applied during the installation phase of the project.

5.1 Marine Ecology

The following section outlines the potential impacts relating to ecology and biodiversity, resulting from the installation of the Beaufort Subsea Fibreoptic Cable. These impacts and mitigations are described in more detail in the accompanying environmental reports (NIS, EcIA, SISAA, Annex IV).

5.1.1 Seals & Cetaceans

As outlined by the NPWS, "*Cetaceans account for 48% of all the native species of mammals, both marine and terrestrial, recorded in Ireland and Irish waters are thought to contain important habitats for cetaceans within the northeast Atlantic. To date, 24 species of cetacean, or 28% of species described worldwide, have been recorded in Ireland. Irish cetaceans include six species of baleen whale and eighteen species of toothed whale, including five species of beaked whale. Twenty-two of these have been reported stranded ashore and 20 species observed at sea. Two species (Pygmy sperm whale and Gervais' beaked whale) are only known from stranded individuals, and two species (Northern right whale and White whale/beluga) have only been recorded historically, with neither species occurring in the stranding record so far. Ireland also has two species of seals, the Common Seal (or Harbour Seal) and the Grey Seal. Whilst both species haul out on land for key stages of their life history, the majority of their time is spent in the marine environment.*"

The protection afforded to marine mammals in Ireland is summarised below:

- Harbour Porpoise Annex II of EC Habitats Directive Annex IV of EC Habitats Directive/Protected species of Wildlife (Amendment) Act/OSPAR List of Threatened and Declining Species and Habitats.
- Bottlenose Dolphin Annex II of EC Habitats Directive/Annex IV of EC Habitats Directive/Protected species of Wildlife (Amendment) Act.
- All Cetacea Annex IV of EC Habitats Directive/Protected species of Wildlife (Amendment) Act.
- Grey Seal/Harbour Seal Annex II of EC Habitats Directive/Protected species of Wildlife (Amendment) Act.

Recent research suggests that there is the foraging range for grey seals is 448km (Carter et al., 2022). Further, the foraging range for harbour seal is estimated at 273 km (Carter et al., 2022). There are a number of SACs designated for cetaceans (harbour porpoise and common dolphin) in Ireland. As these species are a highly mobile species and designated as qualifying interests of Natura 2000 sites outside the Irish EEZ, specific Management Units (MU) are utilised to assess the

potential impacts of a proposed project on these species. Management Units are based on the JNCC Review of Management Unit boundaries for cetaceans in UK waters (2023) methodology. The proposed project is located within the Celtic and Irish Seas MU for harbour porpoise, and the Offshore Channel, Celtic Sea & SW England MU for bottlenose dolphin (IAMMWG, 2015). The Zone of Influence (ZoI) of the proposed project has been extended to include the potential for significant effects on grey seal, harbour seal, harbour porpoise and common bottlenose dolphin as there is potential for these mobile marine mammals to enter the ZoI from within the aforementioned MUs.

5.1.2 Otters

Otters are a semi-aquatic species who use the marine environment for foraging and are protected under Annex II and Annex IV of the Habitats Directive. As detailed by Reid et al. (2013), female otters have territories of 7.5 ± 1.5km in length along a riverine environment and 6.5 ± 1.0km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3km in length with a high degree of variability. However, given the spatial and temporal nature of the proposed works, and the fact that the nearest point of the Beaufort Offshore Cable Route to the Irish mainland is approximately 29km, the proposed project is considered too distant from Natura 2000 sites where otter is a feature of interest for any significant interaction to occur.

5.1.3 Migratory Fish

In relation to Atlantic salmon, it has been found that salmon populations from southeast Ireland appear to migrate towards the shelf edge before crossing the Atlantic towards Greenland for feeding (Rikardson et al., 2021). Recent studies on Twaite Shad recorded movement of up to 950km from the River Severn with one individual detected in the Blackwater Estuary (Davies et al. 2020). However, given the spatial and temporal nature of the proposed works, the proposed project is considered too distant from Natura 2000 sites where it is a feature of interest for any significant interaction to occur. Similarly, SACs designated for lamprey species were considered too distant for any significant interaction to occur.

5.1.4 Potential Effects

The marine installation of a fibre-optic cable is a complex and challenging procedure. From the beginning of the planning stage to determining the final cable route, careful thought has gone into ensuring the longevity of the cable and uninterrupted service. This, in tandem with marine usage licencing and environmental legislation results in the routing of the cable in as stable an environment as possible that will have minimal impact on the environment and threat of anthropogenic disturbance.

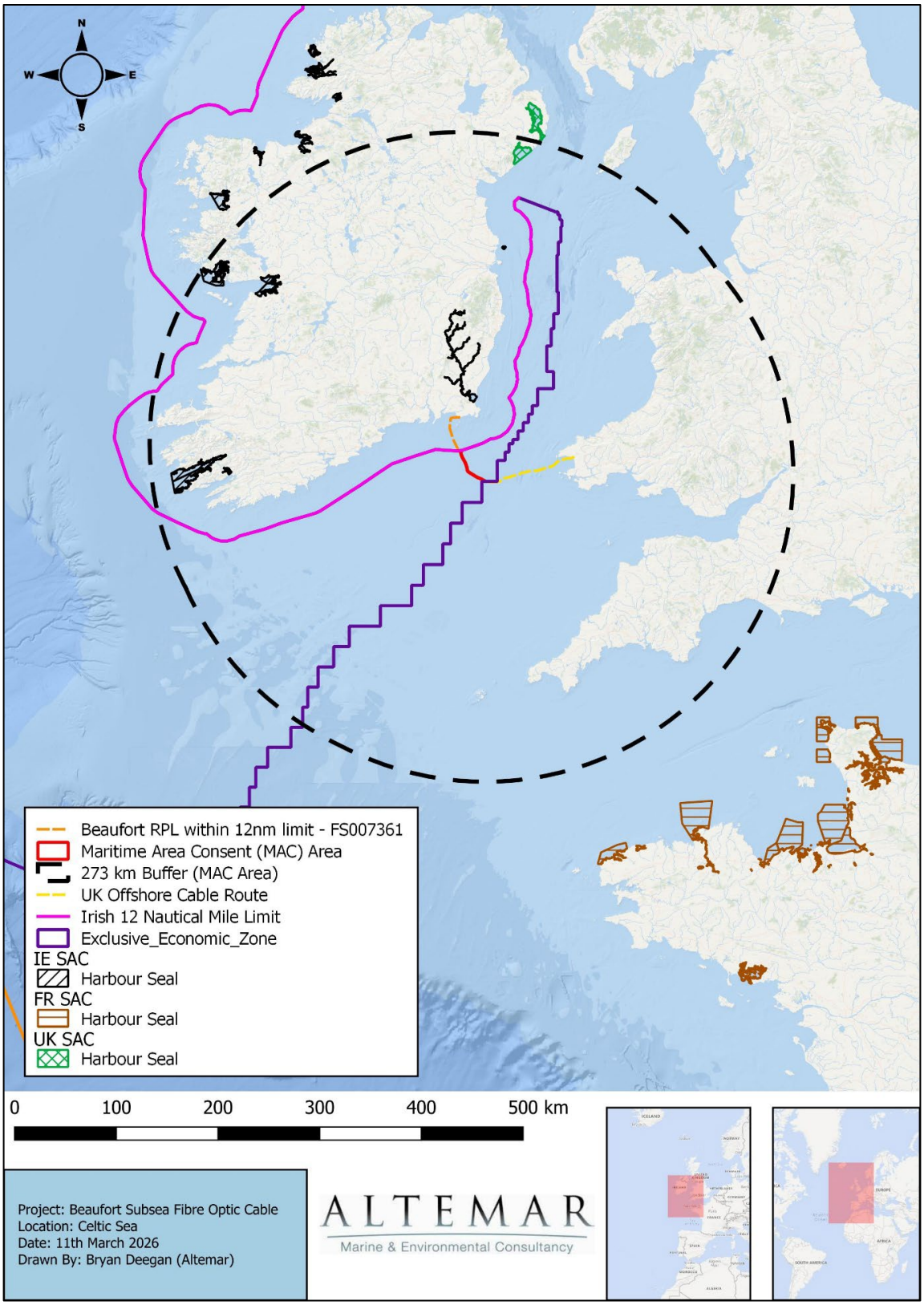


Figure 4: IE, FR & UK SACs Designated for Harbour Porpoise (Phocoena phocoena) within the Celtic and Irish Seas MU for Harbour Porpoises

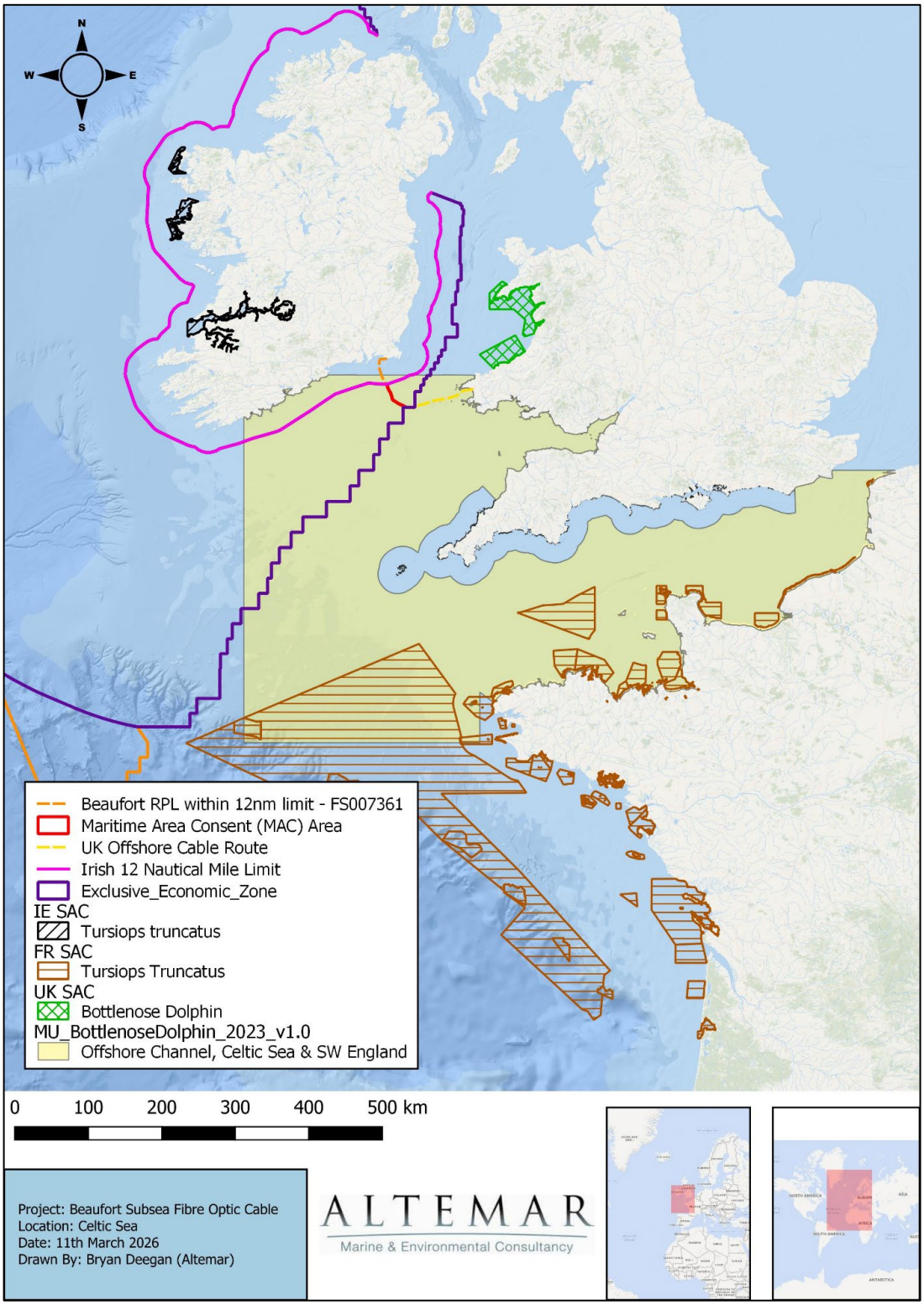


Figure 5: IE, FR, & UK SACs designated got Bottlenose Dolphin (Tursiops Truncatus) within the Celtic Sea. Irish Sea & SW England MU for Bottlenose Dolphin

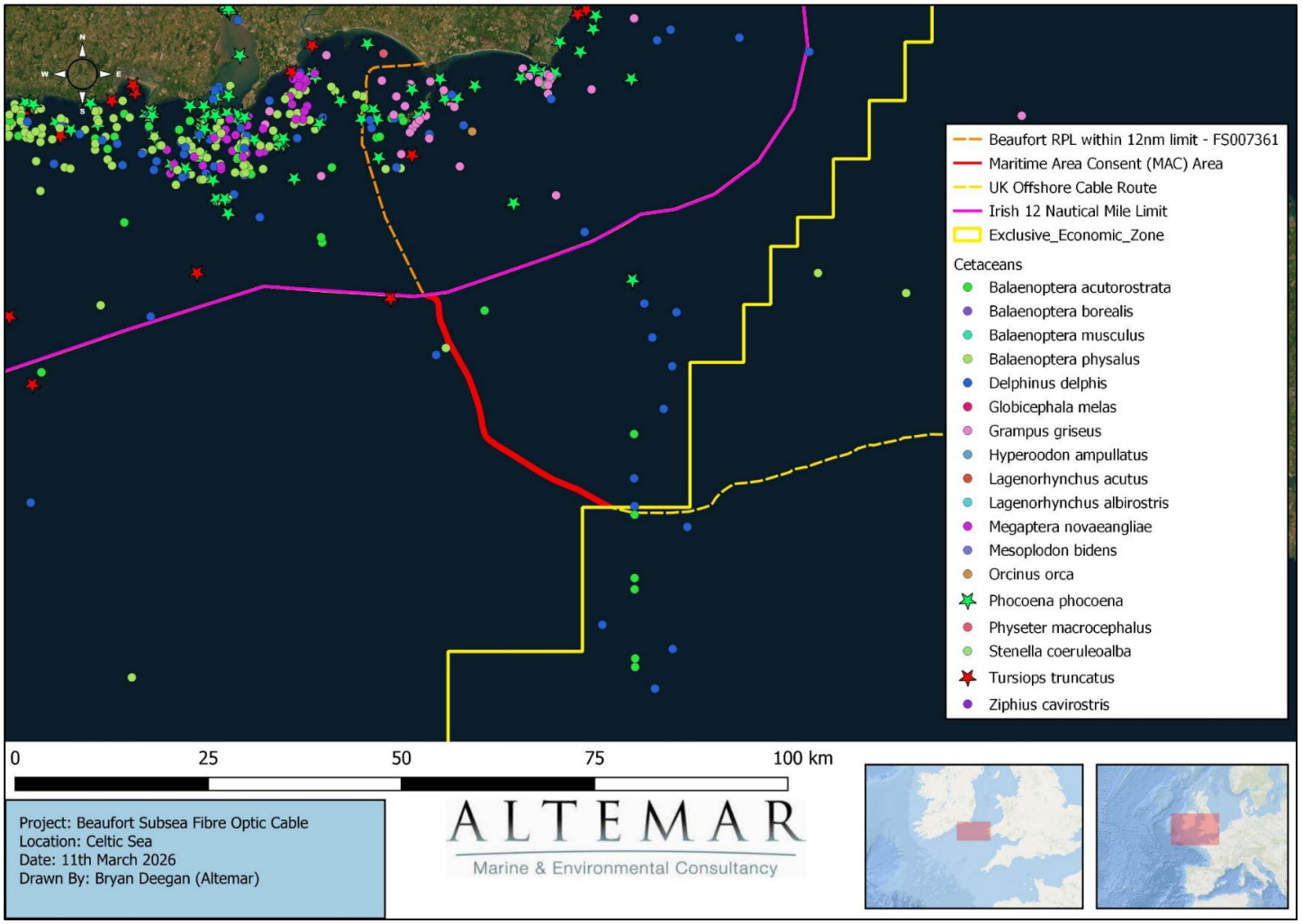


Figure 6: Recorded Cetacean Species Sightings (Source NBDC Sightings Data) proximate Beaufort Offshore Cable Route

5.2 Marine Archaeology & Cultural Heritage

An Underwater Archaeological Impact Assessment (UAIA) was undertaken for the offshore section of the Beaufort Cable System between the Irish 12nm limit and the Exclusive Economic Zone (EEZ), assessing potential impacts on marine cultural heritage.

The study area is located within St George's Channel and comprises a c. 38 km section of the cable route within a 400m-wide corridor, characterised primarily by sandy seabed content with some gravel content. Desktop assessments and archaeological reviews have identified a high potential for submerged prehistoric landscapes, as the area would have been dryland during the late Pleistocene and early Holocene periods.

The archaeological and cultural background indicates long-term maritime activity in the region from prehistory through the medieval and post-medieval periods, including trade, fishing, and navigation routes between Ireland and Britain.

Wreck inventory data indicates:

- One recorded wreck (W18565) within the study corridor.
- No additional known wrecks within 1km of the route.
- However, 325 unlocated wrecks are recorded in the wider area, indicating significant potential for unknown remains.

Geophysical survey data collected during the survey phase of the Beaufort project identified:

- Two potential wreck anomalies, one within the study area and one outside the EEZ.
- One previously recorded wreck (W10924) was not detected, likely due to burial or positional inaccuracy.

Geotechnical investigations (cores, grab samples CPTs) carried out during the survey phase of the Beaufort project identified no material of archaeological significance, with sediments consisting mainly of sands and shelly sands.

The assessment concludes there is:

- Low risk to known archaeological assets, as works avoid identified sites.
- Residual risk to unknown or buried archaeology, including wreck material and submerged landscape deposits.

Proposed works such as Pre-Lay Grapnel Run (PLGR), trenching, and cable burial may disturb previously unidentified archaeological material, although extensive survey coverage reduces this risk.

Mitigation measures include:

- An archaeological review has been undertaken of the final cable route and installation methodology with no issues foreseen.

- A proposed exclusion zone of 100m will be in place around all known or identified archaeological features. No known wrecks are within 100m of the final Beaufort Cable route, therefore it will not enter any known archaeological exclusion zones. Licenced archaeological monitoring of all seabed-disturbing activities.
- Inspection and assessment of any recovered material during operations.

Additional mitigation includes:

- Procedures for discovery of previously unknown archaeology.
- Retention and assessment of organic or paleoenvironmental material
- Post-installation archaeological reporting to relevant authorities.

Overall, with implementation of mitigation measures, no significant impacts on known archaeology are anticipated, although a precautionary approach is required due to the potential of undiscovered archaeology.

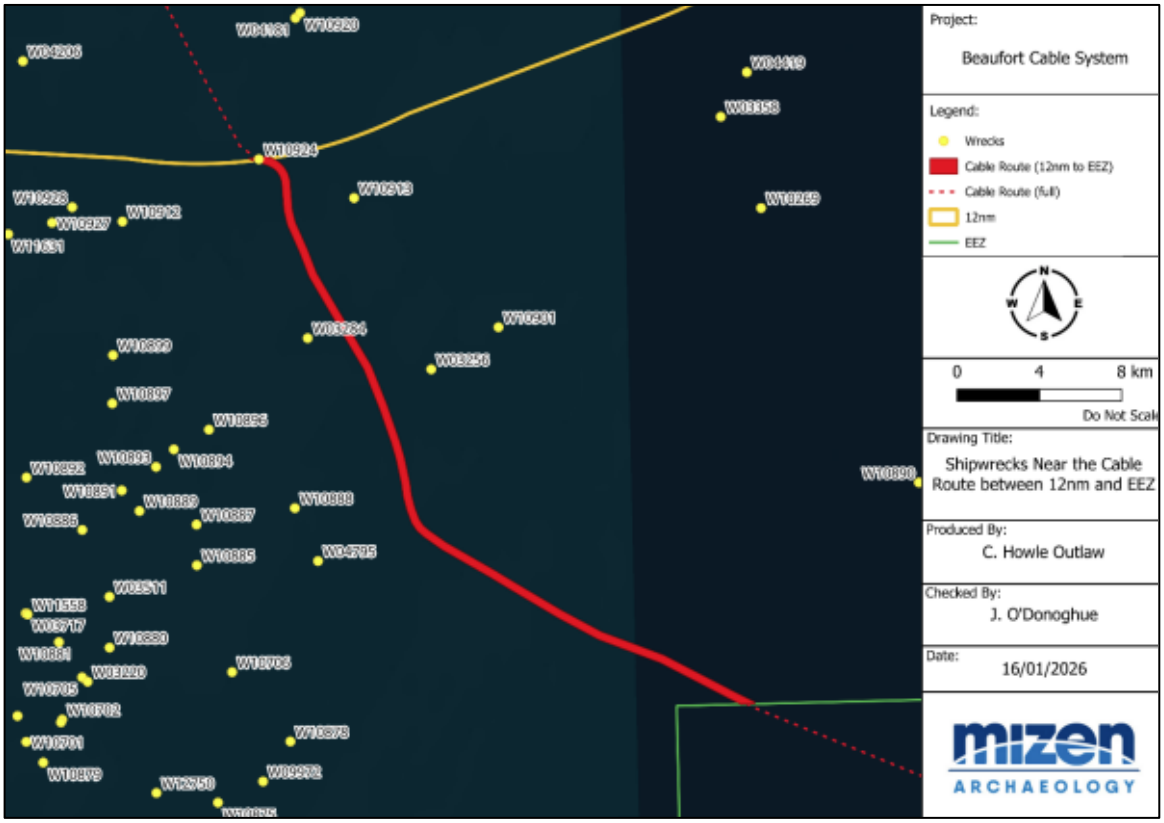


Figure 7: Known Shipwrecks in Vicinity of the Beaufort Cable System

5.3 Seascape, Landscape & Visual Impact

The proposed subsea telecommunications cable will be installed on or beneath the seabed and will not result in the introduction of any permanent above-surface structures. As such, the operational presence of the cable will not give rise to effects on the offshore seascape or coastal landscape character. During installation, the cable lay vessel will be present within the Celtic Sea for a short duration; however, this presence will be temporary, localised, and transient in nature. Given the offshore location and limited installation period, no significant effects on landscape or seascape receptors are anticipated.

5.4 Fisheries management and mitigation strategy (FMMS)

The following section outlines the fisheries management and mitigation strategy (FMMS) for the Beaufort project. This plan includes measures proposed to be implemented to facilitate co-existence with the commercial fishing industry, with the aim of minimising potential impacts to fisheries stakeholders as far as possible.

5.4.1 Overview of Fishing Activities in the Celtic Sea

Saint George's Channel lies between the Irish Sea to the north and Celtic Sea to the south both of which are known for producing fish of high quality and as a result attracting high intensity fishing. Subsurface (bottom) disturbance by mobile bottom-contacting fishing gear (bottom otter trawls, bottom seines, dredges, beam trawls) in the Celtic Seas ecoregion, expressed as average swept-area ratios depicts the high intensity of types of fishing making contact with the seabed (*Figure 8*).

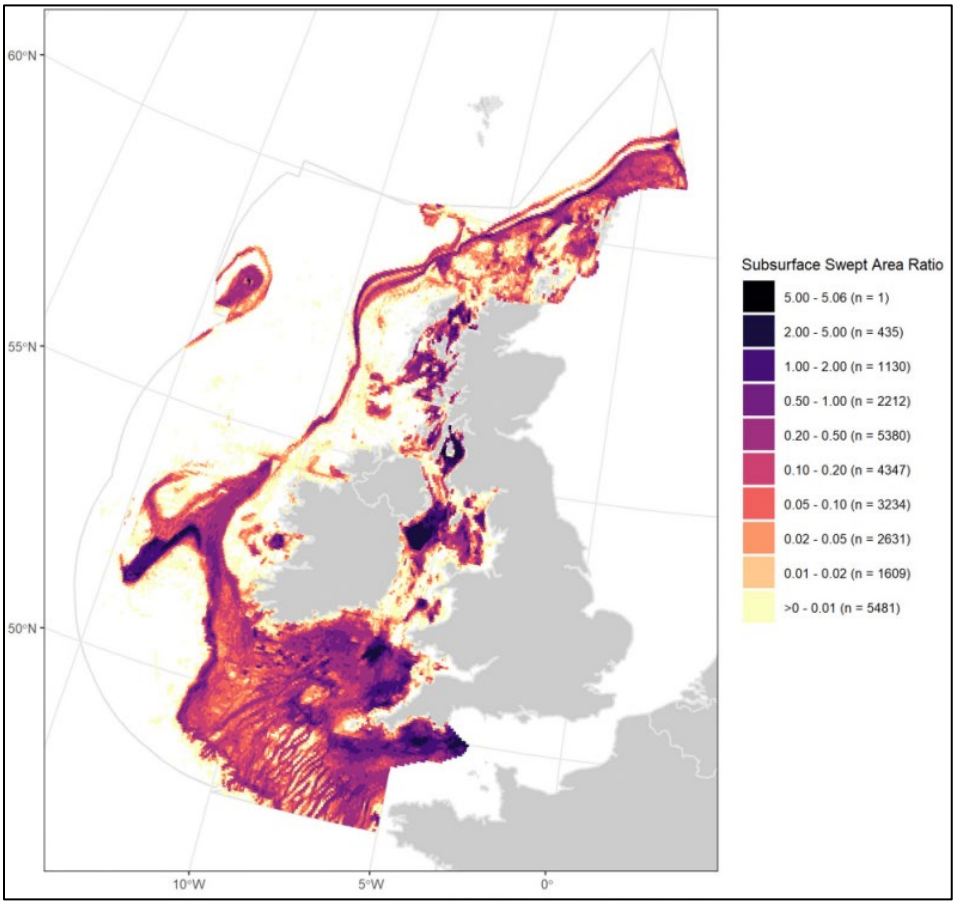


Figure 8: Subsurface Disturbance by Mobile Bottom Contacting Fishing Gear expressed as Average Swept-Area Ratios

The beam trawl consists of a heavy tubular steel beam supported by steel beam heads at each end. These beam heads have wide shoes at the bottom which slide over the seabed. The beam

and beam heads form a rigid framework that keeps the mouth of the trawl open and supports the net (Seafish, 2023). A cone shaped net is towed from this framework with the head rope attached to the beam and each end of the footrope connected to the bases of the shoes. As the gear is towed over the seabed the footrope forms a 'U' shape curve behind the beam and shoes. Most of the beam trawlers found in the area of study are from Belgium. Beam Trawling is the biggest threat from fishing that the Beaufort cable will face.

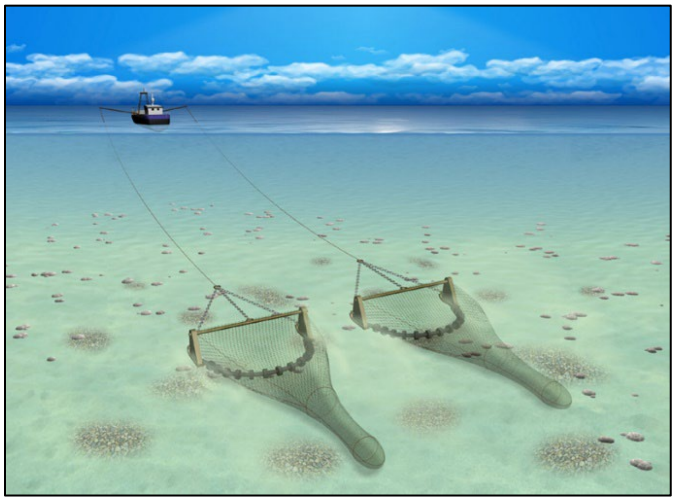


Figure 9: Beam Trawling Fishing Gear

One of the most common types of fishing in the area of study is multi rig trawling. Most vessels which fish consistently throughout the year can work traditional semi-pelagic gear for whitefish. This method of fishing does not pose a huge threat to cables, especially where the cables are buried. However, where cables are surface laid, abrasion by the chains and trawl doors can eventually damage the cables. As will be confirmed by the historical AIS data, most of these twin rig prawn trawlers are Irish vessels. This method of fishing has evolved to be able to efficiently target both bottom living species and some of the round fish living slightly higher in the water column (Seafish, 2023).

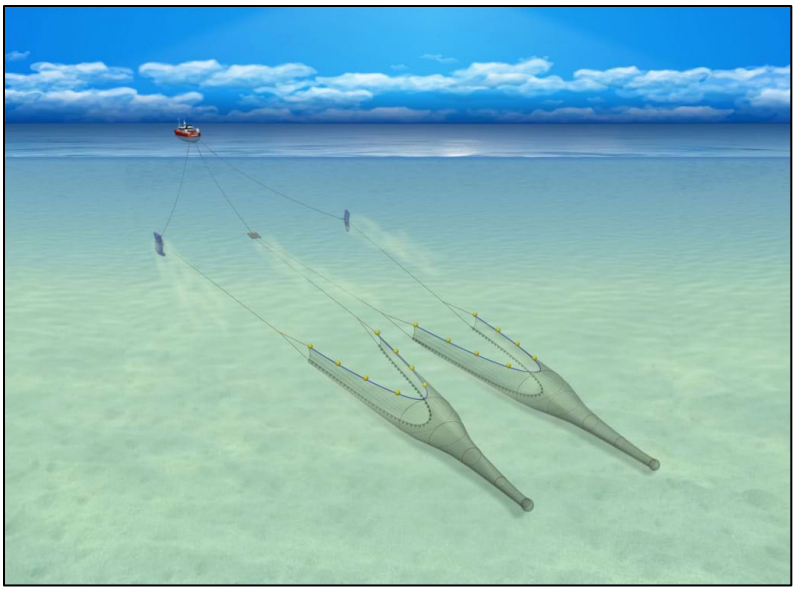


Figure 10: Multi Rig Fishing Gear

Pots are mostly used for inshore fishing to target whelks on the UK side of the study area and crabs on the Irish side. Seabed impact with pots and traps is limited to light contact of the traps and minimal penetration of the seabed from the small anchors or weights that are used at the ends of the fleets of some gears. There may be some movement of the gear and the ropes on the seabed particularly in poor weather, but this will not have much effect on the seabed (Seafish, 2023). The numbers in a fleet can vary from five in some inshore lobster fisheries to over 100 in offshore crab fisheries and Nephrops fisheries. The pots are baited and shot away from the vessel as it steams slowly ahead and, are left on the seabed to fish for a period of, usually, 24 hours.

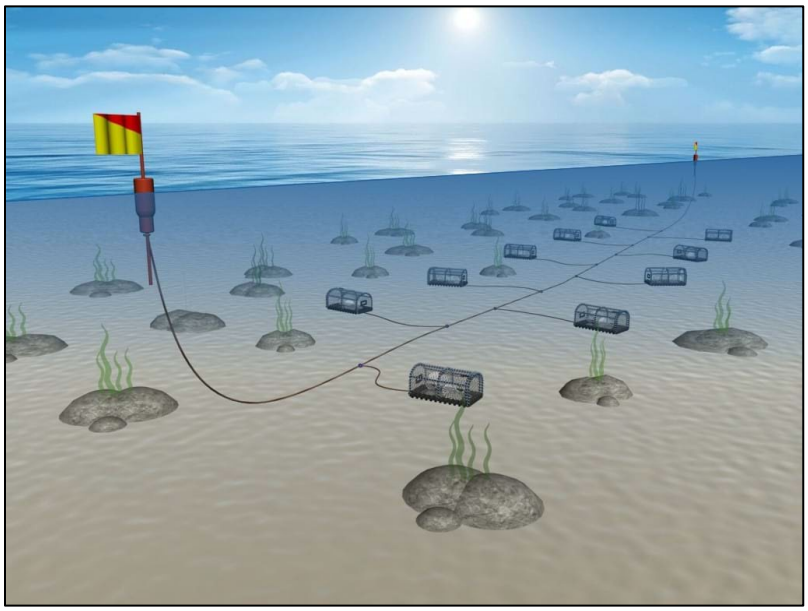


Figure 11: Static Gear - Pots on the Seabed

Due to a rapid growth rate and high market value, the scallop fishery is of high economic importance. Most of the UK and Irish scallops are exported elsewhere, mainly to France as high quality fresh, roe on scallops (Coquille St Jacques). The area in the vicinity of the Beaufort installation corridor does not accommodate intense scalloping, but the threats of dredge fisheries shall be discussed in this CEMP.

An overview of the main fishing grounds in the St. George's Channel is given in *Figure 12* and the Beaufort route is shown overlaying VMS data in *Figure 13*. In relation to the Beaufort route, it can be seen that the majority of the fishing activity is in the fishing grounds to the south of Kilmore Quay and to a lesser extent to the north of The Smalls roughly along the EEZ boundary.

Figure 12: Irish Fishing Grounds in St. George's Channel

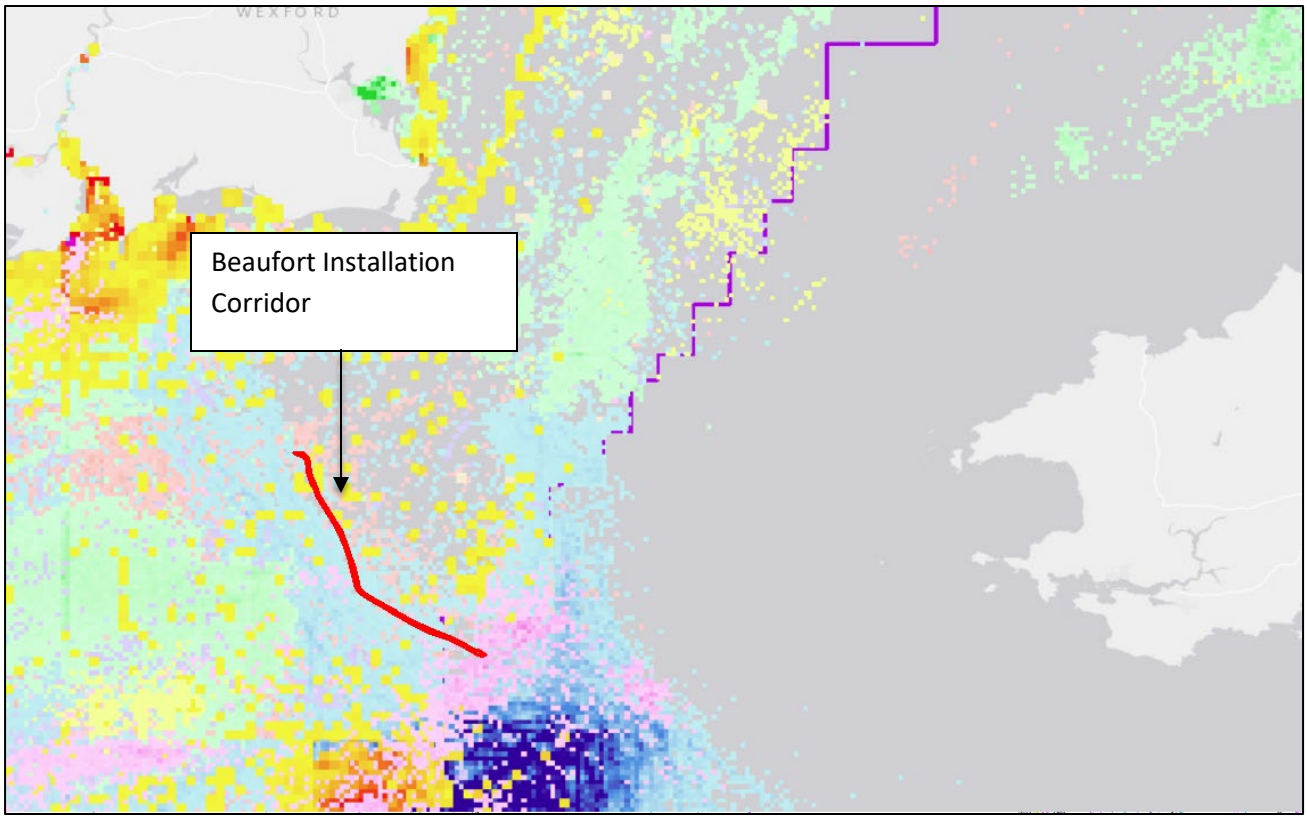


Figure 13: VMS Data in St. George's Channel 2014-2018 (Source: Ireland's Marine Atlas)

5.4.2 Potential Impacts on and by Fisheries

Fisheries are an integral part of the food supply chain throughout Ireland, and for many communities, fishing is a way of life. However, vessels engaged in fishing activities can pose a distinct threat to vulnerable subsea cables. Approximately 70% of cable faults are caused by fishing or shipping vessels, with the prior group accounting for approximately 65% of all cable faults (ICPC; Carter et al. 2009).

Vessels engaged in dredging operations are among the most likely to cause cable faults (Drew & Hopper, ICPC 2009). In this type of fishing operation, a steel dredge fitted with downward pointing teeth (*Figure 14*) is dragged across the seabed. These teeth dig into the top layer of the seabed to capture the buried target species (commonly King Scallops, *Pecten maximus*, or Queen Scallops, *Aequipecten opercularis*). In doing so, the gear may snag and damage cables in areas where burial is shallow or not possible.

In the UK and Ireland queen scallops tend to be targeted during the summer months when the King scallop beds are closed. In the warmer months queen scallops have been shown to become more active (Jenkins et al. 2003). Fishermen use nets instead of dredges which have reduced impacts on the seabed. However, during colder periods queen scallops are fished using dredges.

Dredging is considered a high-risk fishing method for the resilience of the Beaufort cable system. However, this is not a common fishing method in the study area.

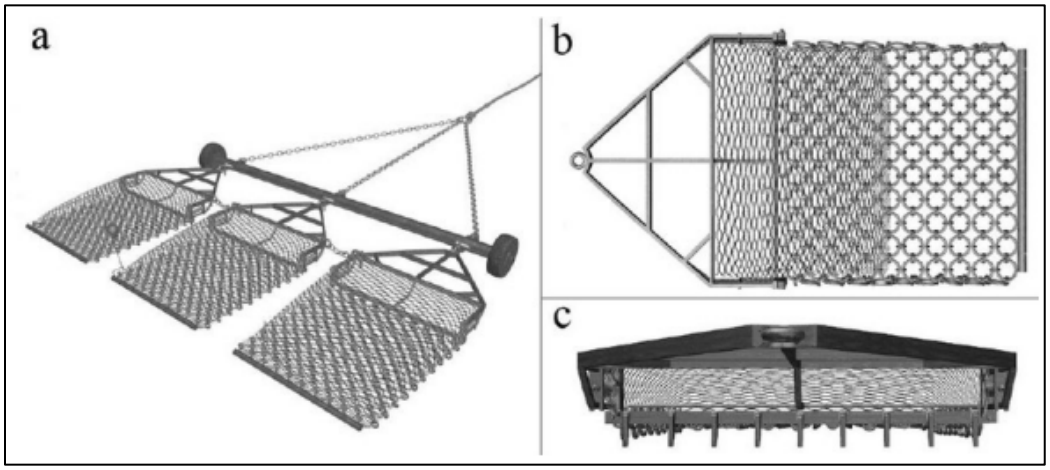


Figure 14: Scallop Dredging Equipment

As discussed previously, trawling vessels drag nets across the seabed. Otter trawl gear is outfitted with otter boards, which are weighted to keep the net open and near to the seabed. The boards and other net components can potentially snag on exposed or shallow cables in their path. However, beam trawlers are much more likely to have an impact on vulnerable cables. The latter gear is outfitted with tickler chains meant to agitate the upper layer of the seabed, rather than cruising just above as the otter trawls are designed to do (*Figure 15*).

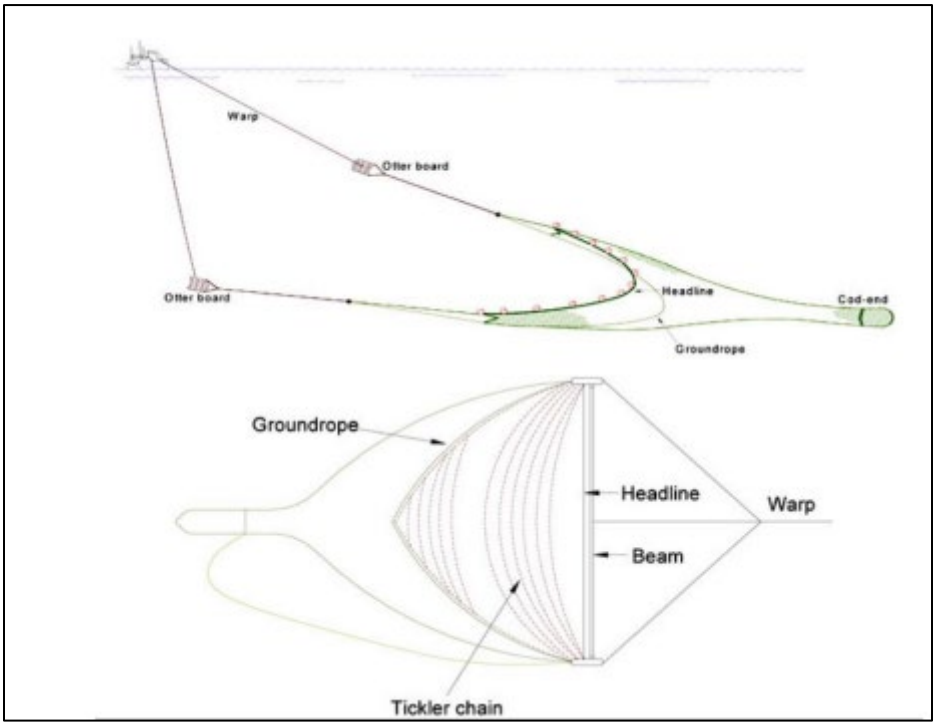


Figure 15: Otter Trawl Gear (Top) and Beam Trawl gear (Bottom)

Static gear fisheries do not typically pose a threat to subsea cables. However, if pots or lines are placed directly over cables, there could be increased risk due to nearby anchoring or snags during retrieval. Pot fisheries for lobster (*Homarus gammarus*) and crab (*Cancer pagurus* and *Necora puber*) are also active in the area, with the relative importance of each species varying regionally.

Fishers engaged in creel methods may experience disruption during the installation and survey periods as they may have to move their gear out of typical fishing grounds during the installation period. High season for target species such as Brown Crab and Nephrops tends to be during the summer months, but fisheries in the region may operate at some level year-round. Seasonality also impacts market value, with lobsters fetching higher values later in the year as exports increase. Impacts to static gear fishers during the installation period should be relatively low.

Potential impacts on the Beaufort Cable System by fishing vessels are detailed in *Table 3* below.

Gear Type	Action	Result
Scallop Dredge Beam Trawler Otter Trawler	Snags exposed/shallow cable	Resultant fault and repair, potential damage to fishing vessel and safety of crew.
Static Gear	Presence impedes installation work	Agreement must be made to remove static gear from cable site during installation/maintenance periods
All vessel types	Improper anchoring	May lead to cable damage and subsequent repairs; may also lead to vessel damage and endanger the crew.

Table 3: Potential Impacts by Local Fisheries

In the process of mitigating any of these potential cable faults or disruptions, some fishers may be impacted. See *Table 4* for details on potential impacts of the cable project on associated fisheries.

Impact	Gear Type	Spatial Extent	Temporal Extent
Loss of access to fishing grounds	Benthic Mobile	Within ~500m if vulnerable cable areas	Installation, maintenance and operational periods.
Loss of access to fishing grounds	Static	Immediate cable vicinity	Installation and maintenance periods only.
Target species distribution shifts	Benthic Mobile Static	Immediate cable vicinity	Installation and maintenance periods only.
Avoidance of surface lay measures	Benthic Mobile	Immediate vicinity of surface lay measures	Operational period

Table 4: Potential Impacts on Local Fisheries

As seen in the tables above, the majority of potential fisheries disruption will occur during installation and maintenance periods. Static gear fishers working along the installation corridor will likely be asked to move their pots for the duration of the install period (likely only 2-3 days in each region). The entire installation process is expected to take less than two months, so individual areas along that installation track are unlikely to be impacted for more than a few days at a time. Cable burial to 1.5 metres is targeted for the entire Beaufort Cable route, subject to seabed conditions in the local area. A temporary protection zone of 1NM around the cable vessel will apply during the installation period, as accorded through the Submarine Telegraph Act (1885), and 1/4NM around cable buoys during maintenance operations. Following installation, the cable may be exposed in some limited areas. Fishers should be aware that the cables may pose a hazard and charted submarine cables should be avoided at all times.

5.4.3 Mitigation Plan

The following tables outline the mitigation plan for the pre-installation, installation and operational phase of the Beaufort project.

Action	Date	Details
Fisheries consultations on FMMS	June – August 2026	Feedback on FMMS is contributed via personal consultations to fisheries stakeholders (static and mobile gear)
FMMS is refined	Q4 2026	Stakeholder feedback is incorporated prior to document submission
FLO undertakes port tours	Q4 2026	Distributes media regarding cable details
FLO convenes with static gear fishers	Q1 2027	Plans are made to move static gear during installation periods as needed

Table 5: Pre-Installation Phase

Action	Details
FLO convenes with affected fishers	Disruption claims will be handled in accordance with ESCA standard operating practices.
FLO is on call	Should any confusion or delay in the project installation arise, the FLO will be available to reconcile the situation.
Guard vessels are coordinated	Guard vessels may be deployed as needed to ensure that cable installation proceeds as safely and efficiently as possible.
Protection zones are agreed	FLO, Client, and monitoring team may agree any "special protection zones" due to limited cable burial or other vulnerability.
Updates are sent to stakeholders	As installation progresses, updates re sent to stakeholders to ensure that clear communication and information sharing continue to streamline the process.

Coastguard are informed of work	Maritime Safety Information (MSI) broadcasts are issued as appropriate

Table 6: Installation Phase

Action	Details
Updates are sent to stakeholders	NtM is distributed informing stakeholders that installation is complete, and the cables are operational.
Post-lay cable burial assessment	Post-lay cable burial is assessed
Inform mariners of any potential dangers in the region	When potential hazards are identified along the cable route, stakeholders will be notified via NtM to ensure that safety is upheld.
Future survey and maintenance work	Occasional survey and maintenance work may be required; in this case, NtM will be issued with reasonable timescale to alert mariners, particularly if gear will need to be moved.

Table 7: Operational Phase

5.4.4 Fisheries Liaison Officer (FLO)

An experienced and well-respected member of the fishing industry has been appointed as the fisheries liaison officer (FLO) for the Beaufort project. The appointed FLO has been involved in continuous engagement with the local fisheries organisations ahead of the installation of the Beaufort cable system.

During the installation phase of Beaufort, the designated FLO will be available 24/7. If required, the FLO will be able to record the location and extent of any surface cable protection measures so that these can be accurately mapped and swiftly communicated to fisheries stakeholders to ensure the safety of local marine users. Similarly, the FLO can potentially support the guard vessels as they deflect vessel traffic or other interruptions if required. The FLO will handle all fishing related responsibilities such as managing project teams and stakeholders, issuing further NtMs, speaking directly with stakeholders and project managers, and facilitating the removal of any fishing gear as requested by the installation team. The FLO will facilitate necessary communications between the offshore installation team, project management team, and other relevant bodies. Whenever possible, NtMs will be issued with at least 10-14 days' notice of upcoming operations.

In advance of the installation of the cable system, the appointed FLO will carry out several port tours to several fishing hubs in the vicinity of the works area. Various maritime stakeholders will be visited as part of this process including Fishing Federations, Fish Producer Organisations, local fishing groups (which are not members of larger organisations), and inshore fisheries groups and advise on the work. The purpose of these port tours will be to outline the overall Beaufort project to the stakeholders including the mitigation strategy, project scale and timing and the short-term nature of the potential impacts of the project on fishing activities in the region. Proposed locations and preliminary dates for the FLO port tours are shown in *Table 8* below. The exact scheduling of this port tours will be confirmed closer to the time.

Port	Location	Date
Rosslare	Co. Wexford, Ireland	March 2027 (TBD)
Kilmore Quay	Co. Wexford, Ireland	March 2027 (TBD)
Dunmore East	Co. Waterford, Ireland	March 2027 (TBD)
Milford Haven	Pembrokeshire, Wales	March 2027 (TBD)
Tenby	Pembrokeshire, Wales	March 2027 (TBD)

Table 8: Proposed FLO Port Tour Locations and Dates

If required, the project FLO will disseminate information to any guard vessels regarding seasonal variations in fishing patterns. Seasonal fishing patterns for the entire cable route will be monitored and considered.

5.4.5 Guard Vessels

If required, guard vessels may be utilized as part of the Beaufort project. The selection of guard vessels would align with , the project specification and vessel availability during each phase of project development, installation, and maintenance. Where possible, the Beaufort project aims to incorporate local mariners into the role of guard vessels. This will encourage community involvement with the project and will also provide a knowledgeable, local crew, many of whom have successfully completed guard vessel work in the past on similar projects.

If used, guard vessels will be stationed between approximately 500m and 1 nautical mile from the installation vessels during cable-lay operations. If mariners approach the working zone too closely (per any defined protection zones), guard vessels will ensure that they will be redirected safely around the working zone, avoiding any potential vessel collisions or any risks to the cable. Additional guard vessels may be deployed as needed to cover high risk cable areas during the installation; these sensitive areas may include areas of high fishing concentrations, exposed cable sections, and cable crossings.

During guard vessel operations, the crew will utilise AIS, RADAR, and visual detection to identify and monitor potential threats to the installation process; monitoring will continue round the clock until installation operations have ended or as otherwise agreed. Similarly, guard vessels stationed over vulnerable cable areas will remain on 24/7 monitoring duties until such a time that this is deemed no longer necessary.

In addition to the NtM regarding cable installation that will have been previously distributed, mariners in the installation area will receive broadcast updates via radio, these radio updates will provide details regarding the location and expected duration of cable installation operations. The contactor's team will be responsible for the broadcast of radio updates.

Vessels will be able to transit over the cables once they have been successfully installed and buried. Any seabed invasive activities such as anchoring and benthic trawling/dredging in the vicinity should be avoided until cable burial or other protection has been ensured. The project goal is to achieve as much cable burial extent as possible to minimise the impacts on fishers and other marine users in the region.

5.4.6 Protection Zones

If deemed necessary by the installation vessel, master protection zones may be defined along the cable route during the installation phase The behaviour of vessels operating within the protection zones will be monitored and analysed in order to assess their potential for causing interference with the cable laying operation. A standard configuration for the protection zones which could be used for this project are outlined as follows:

- Zone 1 (500m either side of cable route). Due to the limited manoeuvrability of the cable lay vessel during installation, other vessels which enter this zone are of concern to the safety of the cable, installation vessel and crew and will trigger immediate intervention from the guard vessels.
- Zone 2 (1,000m either side of cable route). Vessels entering this zone may be of concern to the safety of the cable and they will be notified of the cable lay operations by the monitoring team.
- Zone 3 (1NM either side of cable route). An early warning zone for vessels approaching the cable area. Monitoring team can initiate early contact with vessels of concern before they approach the cable area.

5.4.7 FMMS Conclusion

With a two-month expected installation timeline and a small installation footprint, the Beaufort Project aims to minimise disruptions to local fisheries and other marine users. However, as with any subsea infrastructure installation project, there is always some potential for this project to impact local fisheries. The Beaufort project team will work collaboratively to ensure that stakeholder relationships are built around efficient and transparent communication pathways. In doing so, the Beaufort project aims to minimise and minimize impacts on the fishing industry.

5.5 Aquaculture

There are no licensed aquaculture sites within or adjacent to the proposed offshore installation corridor. The nearest aquaculture facility is an oyster and clam farm operated by Bannow Island Shellfish Ltd.; it is approximately 40km from the installation corridor. The nearest aquaculture on the UK side is a seaweed farm operated by Car-y-Mor; it is approximately 67km from the installation corridor. No interaction pathways have been identified. As such, the installation activities are not expected to result in any effects on aquaculture operations.

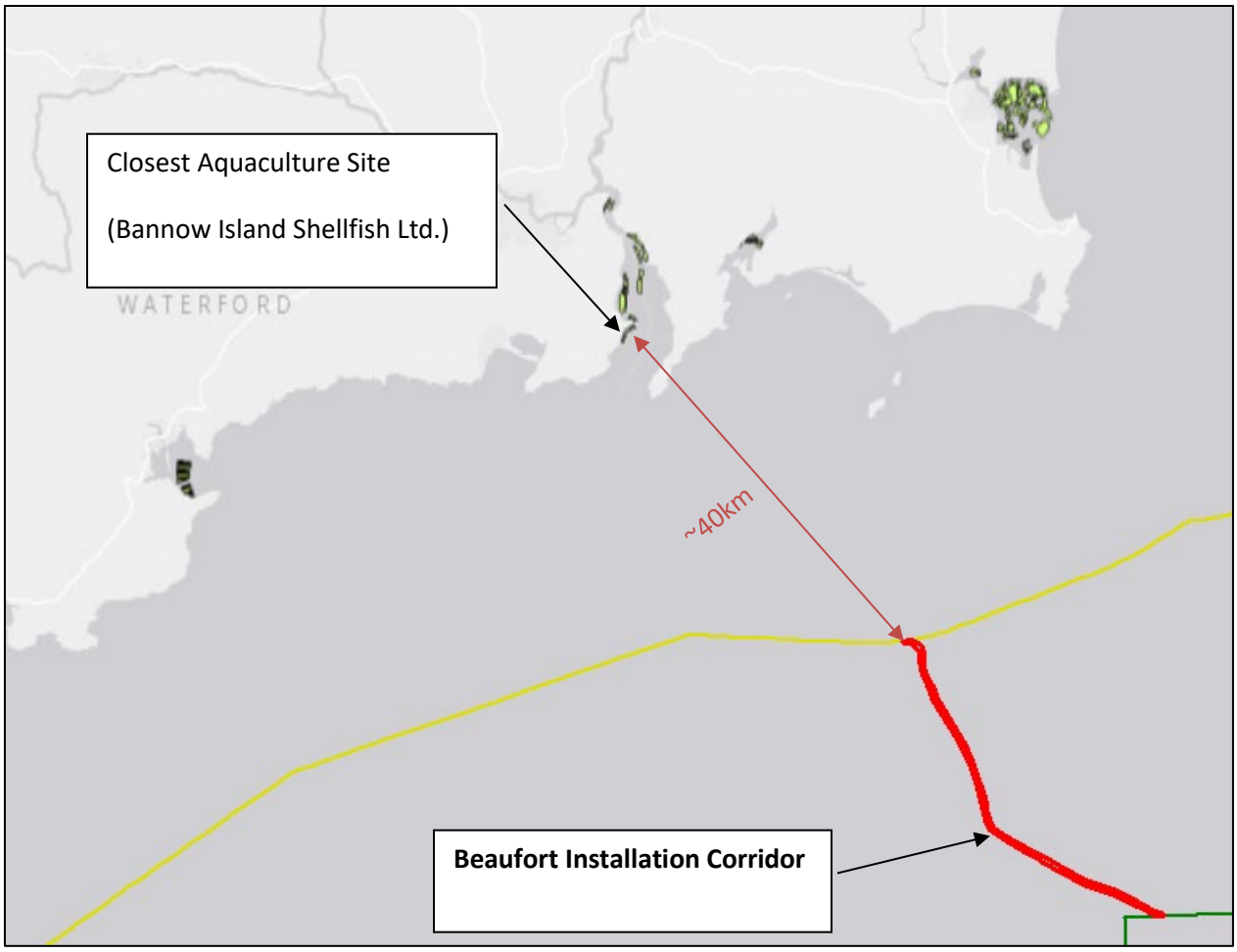


Figure 16: Irish Aquaculture Sites in Relation to the Beaufort Installation Corridor

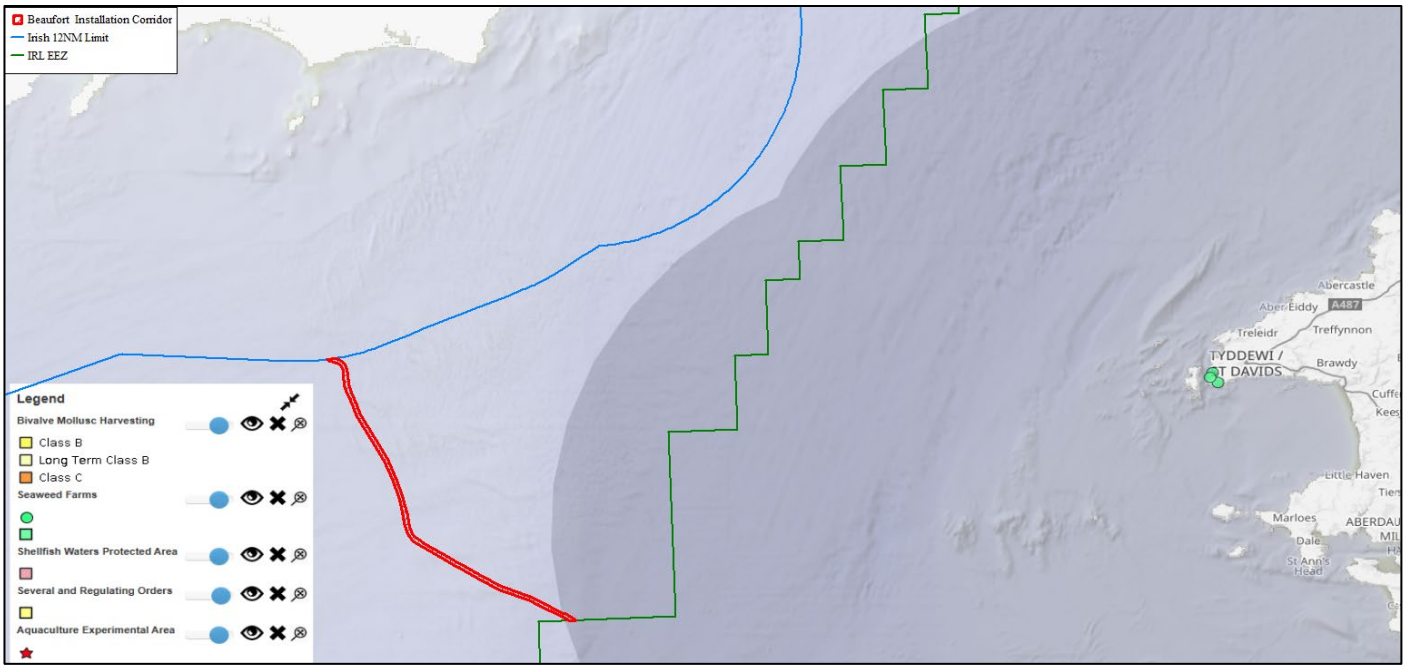


Figure 17: Welsh Aquaculture Sites in Relation to the Beaufort Installation Corridor

5.6 Vessel Management Plan (VMP)

The following section outlines the vessel management plan (VMP) for the Beaufort project.

5.6.1 Marine Traffic in the Vicinity of the Installation Corridor

Figure 18 and *Figure 19* represent the density of cargo vessel and tanker movements in the vicinity of the cable installation corridor respectively. This AIS data relating to vessel movement was sourced from Natural Resources Wales.

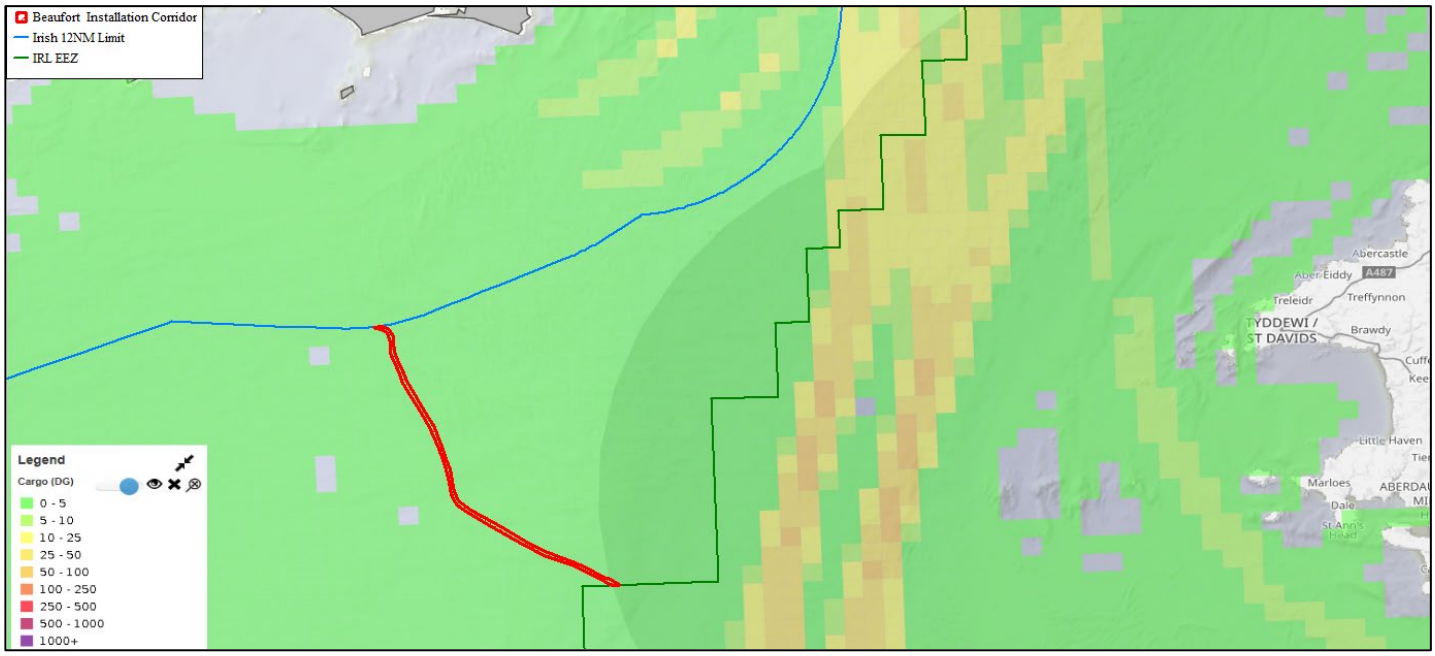


Figure 18: Density of Cargo Vessel Movements in Vicinity of Beaufort Installation Corridor

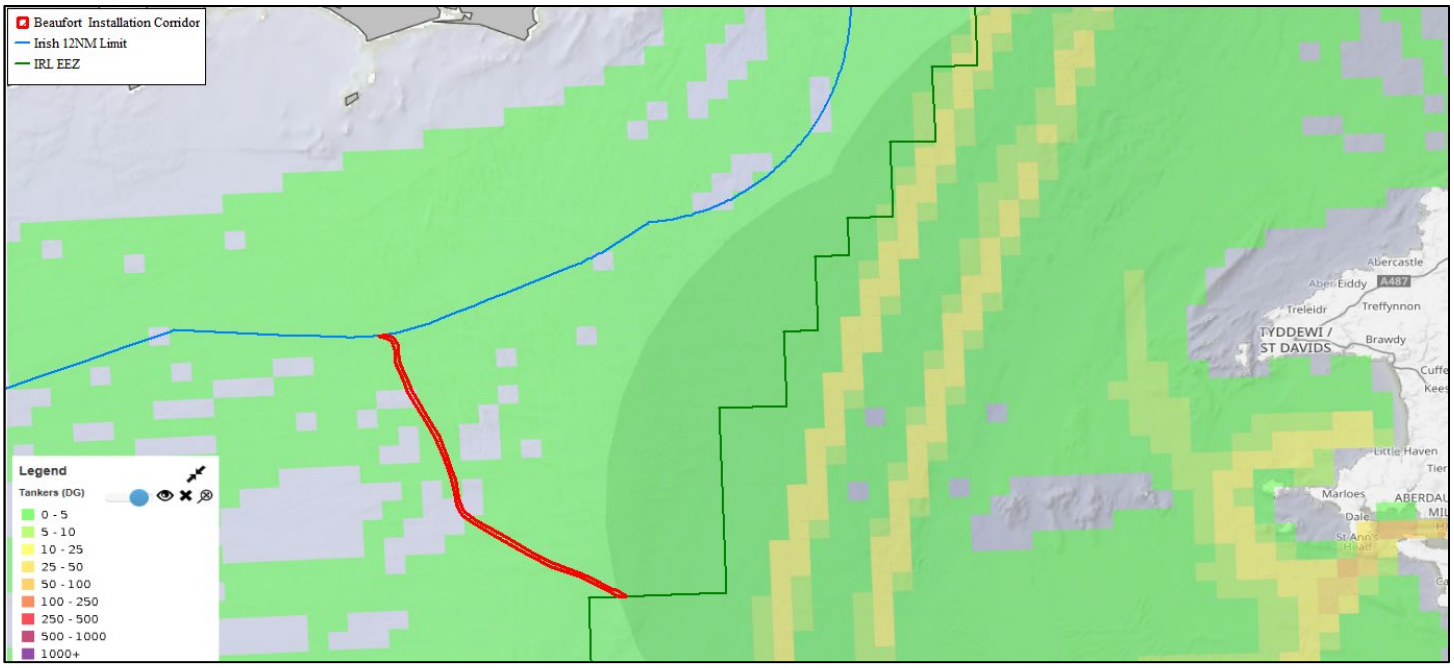


Figure 19: Density of Tanker Movements in Vicinity of Beaufort Installation Corridor

There are two prominent shipping lanes used by large vessels which can be seen clearly in *Figure 18* and *Figure 19.* They both run in a north-south direction linking Dublin and Liverpool with continental Europe. Within Irish territorial waters, the cable installation operations will be temporary and a sufficient distance from the shipping lanes to not cause any significant disruption approximately 12.5km).

Figure 20 shows the density of passenger vessel movements in the vicinity of the cable installation corridor. The closest major ferry route is Rosslare, Co. Wexford to Fishguard, Wales, it is approximately 44km from the installation corridor. Overall, there is a very low density of passenger vessel traffic within the installation corridor, and no impacts are expected to passenger vessel services due to the installation works.

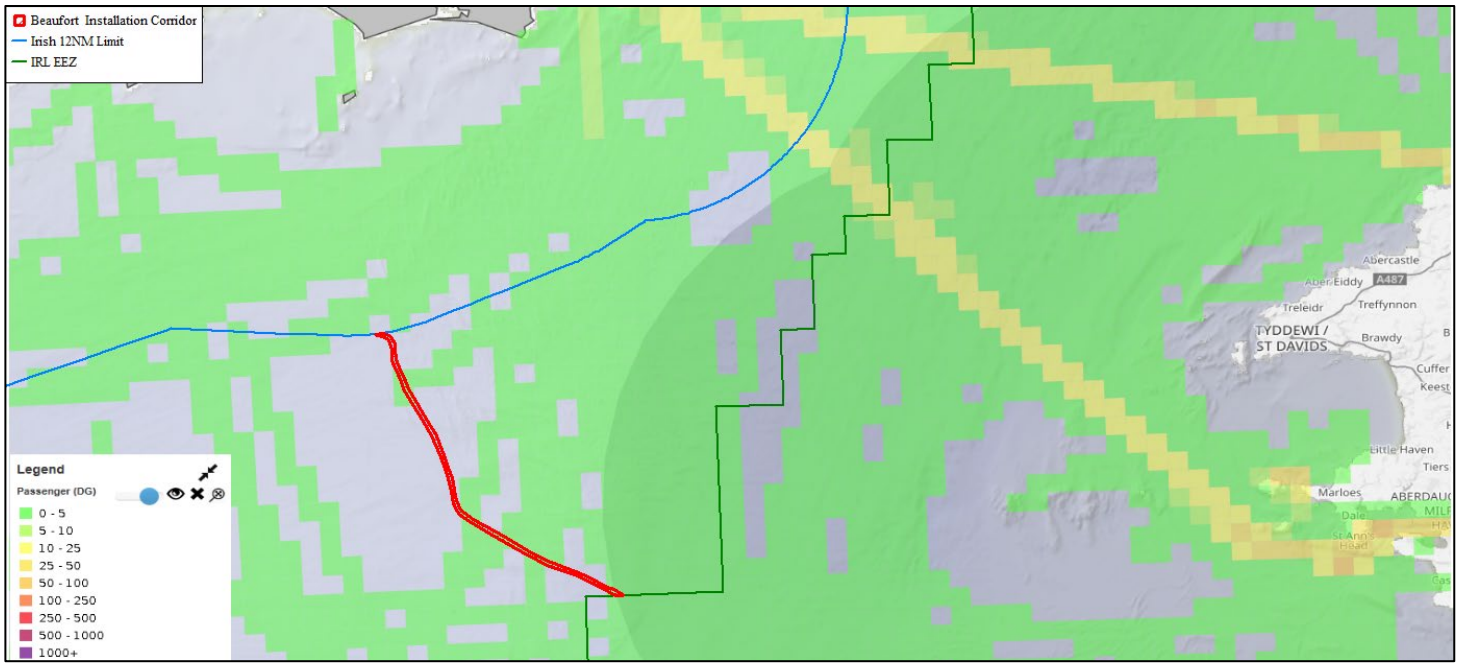


Figure 20: Density of Passenger Vessel Movements in Vicinity of Beaufort Installation Corridor

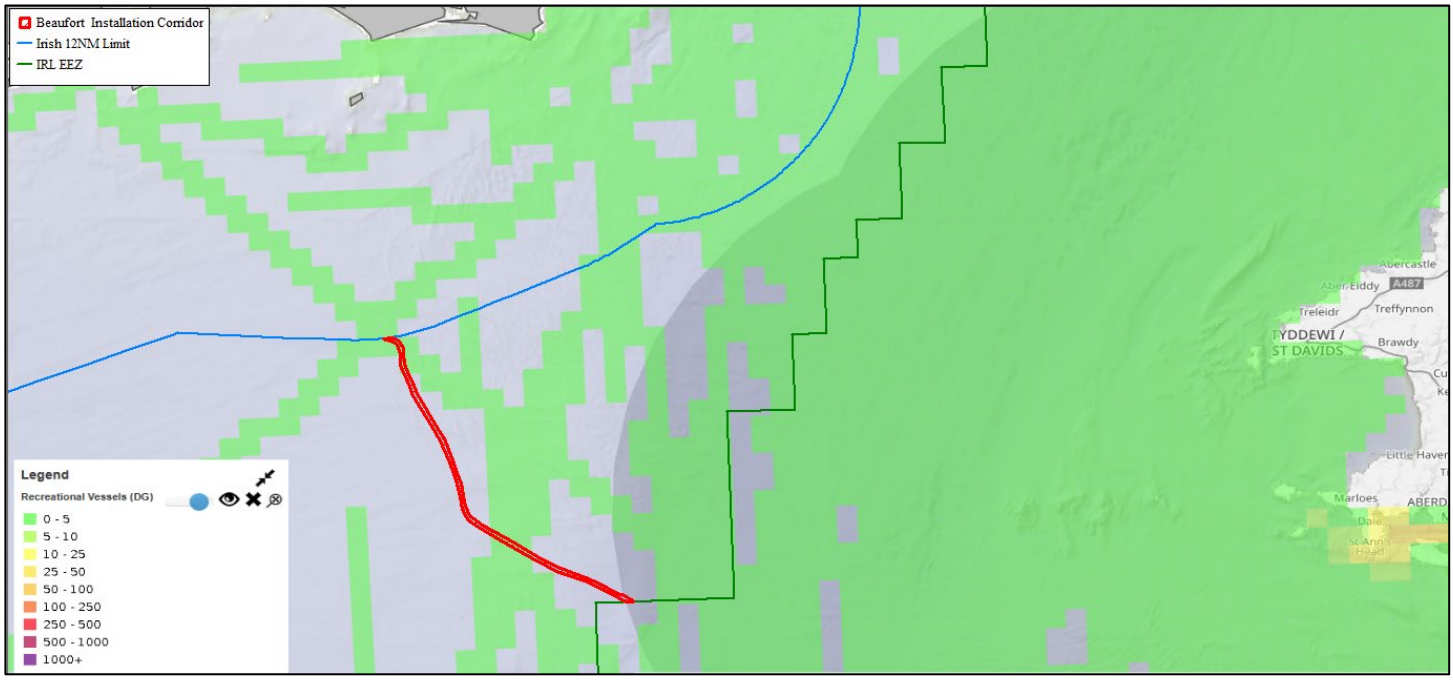


Figure 21: Pleasure Craft Vessel Activity in the Vicinity of the Beaufort Installation Corridor

5.6.2 Hazard Identification & Risks

The following section outlines some of the main navigation hazards identified during cable installation and the primary causational effect which can lead to such hazards occurring.

- *Collision* – Collision is the uncontrolled coming together of 2 vessels underway. It is applicable to all sizes and types of vessels. Collision hazards are present during every vessel movement where other vessels are or could be present. The main factors affecting occurrence likelihood are vessel density, navigation constraints and vessel control.
- *Contact* - Contact is the uncontrolled coming together of a vessel and either a fixed structure or a stationary vessel. It is applicable to all sizes and types of vessels. The main factors affecting occurrence likelihood are navigation constraints and vessel control.
- *Grounding* - Grounding is the unintentional coming together of a vessel and the bed of the river, sea or dock. While applicable to all types of vessel it is more likely for larger deeper draughted commercial vessels. Grounding hazards are more likely for vessels as draught increases. The main factors affecting occurrence likelihood are navigation chart accuracy, navigation planning and vessel control.

5.6.3 Primary Causes

- *Vessel Proximity* – Restrictions on the width of navigable water inherently increases the proximity at which vessels will need to navigate.
- *Equipment Failure* – Failure of on-board equipment can render vessels adrift and unable to maintain navigational control thereby increasing the risks of collision.
- *Human Error* - Human error by the Master or pilot of a vessel can be a contributory cause in marine incidents and the potential for its occurrence requires consideration in all assessments.

5.6.4 Risk Matrix

	Negligible	Minor	Moderate	Major	Catastrophic
Rare	1	2	3	4	5
Unlikely	2	4	6	8	10
Possible	3	6	9	12	15
Likely	4	8	12	16	20
Almost Certain	5	10	15	20	25

Table 9: Classification of Risks

The risk matrix score is assigned one of four colour coded classifications. Green: Very Low, Yellow: Low, Orange: High and Red: Very High. The risk classification indicates the magnitude and acceptability of the risk and guides whether additional mitigation control measure are required to bring the risk to ALARP principles or a Low classification.

Hazard	Cause	Phase	Traffic	Pre Mitigation			Mitigation Controls	Post Mitigation		
				L	S	R		L	S	R

Collision	Vessels transiting in vicinity of cable installation corridor during cable lay	Installation	All	3	4	12	Issue of Notice to Mariners	2	3	6
Grounding / Collision	Equipment Failure	Installation	Main Lay Vessel	3	4	12	Contractor / Vessel Operating Procedures	2	3	6
Grounding	Human Error	Installation / Maintenance / Repair	All	3	4	12	Contractor / Vessel Operating Procedures	1	3	3
Contact	Vessels transiting in vicinity of cable installation corridor during cable lay	Installation	Main Lay Vessel	3	4	12	Issue of Notice to Mariners, notification to Port of Rosslare, impact protection fenders	2	3	6
Collision	Vessels transiting in vicinity of cable corridor during cable repair	Maintenance / Repair	Cable Repair Vessel	3	4	12	Issue of Notice to Mariners, notification to Port of Rosslare	2	4	8
Grounding	Equipment Failure	Maintenance / Repair	Cable Repair Vessel	3	4	12	Suitable shallow draft vessel, planning of operations in advance based on tide levels.	2	3	6
Contact	Vessels transiting in vicinity of cable corridor during cable repair	Maintenance / Repair	Cable Repair Vessel	3	4	12	Issue of Notice to Mariners, notification to Port of Lowestoft	2	3	6
Snagging	Cable exposed on seabed surface	Operation	All	3	3	9	Burial assessment, Bury cable to 2m, Cable awareness charts	1	3	3

Table 10: Navigation Risk Assessment

5.6.5 Navigational Safety Measures during the Installation Phase

Notifications and Monitoring

- Prior to commencement of cable installation, MARA, the Irish and UK Coastguards, the Marine Management Organisation and local fishers will be notified of the planned start and the estimated completion dates for the operations.
- Prior to commencement, localised weather information will be provided to all project vessels for the duration of the cable lay operations.
- Vessels will be monitored via direct communication and Automatic Identification System (AIS) for any potential vessel access conflicts.
- A NtM will be issued in advance of the works.

Temporary Lighting and Marking

- Temporary lighting and marking will **not** be required during installation.

Guard Vessels

- Guard vessels may be required at the installation corridor at various phases of the project, including during the installation when the cable may be temporarily vulnerable at certain locations due to insufficient burial.
- During these periods, the vulnerable area will be monitored by guard vessel(s) to further protect the area and to provide additional information to third-party vessels.
- The decision on when to use a guard vessel will be informed by an ongoing risk assessment process for the activities required to install the Beaufort cable system.

Safe Pass Distances

- There is currently no framework by which statutory safety zones can be deployed for Irish offshore infrastructure developments. However, the Developer may utilise advisory safe passing distances around project infrastructure or works associated with the installation phase. These advisory safe passing distances will be promulgated via the means set out in *Section 5.6.7* and will serve to alert passing mariners to potential hazards.

RAM Operations

- Restricted in their ability to manoeuvre (RAM) vessels will be utilised during the cable installation works. RAM vessels are those restricted in their ability to manoeuvre as a result of the nature of the work they are undertaking and therefore are restricted in avoiding an approaching vessel(s). All RAM vessels involved in the construction of the Beaufort Cable System will comply with the COLREGs (IMO, 1972/77). All vessels, regardless of their nationality, are required to comply with this convention to ensure that they do not interact with vessels that are restricted in their navigational ability.
- RAM vessels will display lights and shapes to indicate their restrictions. They will transmit safety warnings on Very High Frequency (VHF) to inform other vessels of their actions using the 'Securité' message if the messages contain important information relating to navigation.
- RAM vessels will comply with vessel type regulation information transmitted through AIS and show current navigational status at all times to ensure other vessels equipped with AIS can identify that they are RAM.

5.6.6 Navigational Safety Measures during the Operational Phase

Notifications and Monitoring

- Prior to commencement of any cable maintenance or repairs, MARA, the Irish and UK Coastguards, the Marine Management Organisation and local fishers will be notified of the planned start and the estimated completion dates for the operations.
- Prior to commencement, localised weather information will be provided to all project vessels for the duration of the cable maintenance/repair operations.
- Vessels will be monitored via direct communication and Automatic Identification System (AIS) for any potential vessel access conflicts.
- A NtM will be issued in advance of the works.

Temporary Lighting and Marking

- Temporary lighting and marking will **not** be required during cable maintenance or repairs.

Guard Vessels

- Guard vessels may be required at various phases of the project, including during the operations phase when sections of the cable may be temporarily vulnerable at certain locations due to insufficient burial.
- During these periods, the vulnerable area will be monitored by guard vessel(s) to further protect the area and to provide additional information to third-party vessels.
- The decision on when to use a guard vessel will be informed by an ongoing risk assessment process relating to the specific maintenance/repair operation in question.

Safe Pass Distances

- There is currently no framework by which statutory safety zones can be deployed for Irish offshore infrastructure developments. However, the Developer may utilise advisory safe passing distances around project infrastructure or maintenance or repair works associated with the operational phase. These advisory safe passing distances will be promulgated via the means set out in *Section 5.6.7* and will serve to alert passing mariners to potential hazards.

5.6.7 Promulgation of Information

Notice to Mariners

- NtM will be issued in advance of any activity associated with the Proposed Development which may impact upon navigational safety. The Developer will liaise with the Department of Transport who may issue the NtM via their website as Marine Notices(gov.ie - Marine Notices 2023 (www.gov.ie)).
- Temporary lighting and marking will **not** be required during installation.

Marine Notices

- Marine Notices are issued by the Department for Transport, and are intended to publicise important safety, regulatory and other information relating to the maritime sector in Ireland. The Department for Transport will be included on the marine stakeholder distribution list and will therefore be provided with NtM issued by the Developer. The

Department for Transport may choose to publish the information provided in the NtM as Marine Notices.

Fishing Vessels

- The approach to the promulgation of information for fishing vessels is outlined in the FMMS (*Section 5.4*).

Radio Navigational Warnings

- The approach to the promulgation of information for fishing vessels is outlined in the FMMS (*Section 5.4*).
- Radio navigational warnings may be issued if an activity or incident poses a danger to other marine users. Examples of when radio navigational warnings could be issued are:
    - Failures to light signals, fog signals, buoys, or other aids to navigation (AtoN).
    - Establishing new AtoN.
    - Cable laying activities, where a risk is posed to passing traffic.
    - Other underwater operations that may constitute potential dangers in or near shipping lanes.
    - Vessels not under command or undertaking significant RAM operations.

Incident Reporting

- As required under the Merchant Shipping (Investigation of Marine Casualties) Act, 2000, any marine incidents / casualties shall be reported to the Maritime Survey Office (MSO) as soon as is practicable following the occurrence. Following the initial report any relevant details of the incident requested by the Marine Casualty Investigation Board (MCIB) will be provided.

Port & Harbour Liaison

- The Developer will request that the relevant harbour masters, Port Authority or marina operator the appropriate information relating to the Beaufort Project (indicatively the NtM) be displayed at the following harbours and ports:
    - Rosslare
    - Kilmore Quay
    - Dunmore East
    - Milford Haven

5.7 Existing Marine Infrastructure

5.7.1 Subsea Crossings

The proposed route between the Irish 12nm limit and the EEZ boundary entails a total of 4 subsea crossings of existing in-service telecoms cables and an electrical interconnector. Further details of the crossings are shown in *Table 11* below.

Name	Type	Position	Water Depth	Latitude	Longitude
UK-IRL Crossing 1	Telecom	KP 41.9	55m	51° 53' 45.5170" N	6° 34' 01.9208" W
Greenlink Interconnector	Electrical Interconnector	KP 58.8	60m	51° 45' 20.6984" N	6° 29' 02.1085" W
UK-IRL Crossing 1	Telecom	KP 65.8	66m	51° 43' 04.2921" N	6° 24' 24.1696" W
Hibernia Atlantic	Telecom	KP 74.4	76m	51° 40' 59.1939" N	6° 17' 47.6817" W

Table 11: Subsea Crossings within Installation Corridor

As highlighted in *Table 11*, the Beaufort cable has 3 crossings over in-service telecoms cables between the Irish 12nm limit and the EEZ boundary, crossing the Ireland-UK Crossing 1 twice and Hibernia Atlantic Seg D once. Crossing agreements will be put in place with the respective cable owners to allow the in-service cables to be crossed directly with the jetting sword in free-float mode. This enables both the crossed cable and the installed cable to be jetted to depth and precludes the need for pre and post crossing works.

The following methodology will be implemented at the cable crossings: the cable lay speed will be reduced when the cable lay vessel is approaching the crossing. At 20 m from the crossing the sword will be put in the free-floating mode. In the free-floating mode, the sword is pointing 45 degrees downwards, it is not locked in this position, and it will slide over obstructions. In this mode the sword will trench the cable and the crossed product to a burial depth of approximately 1 metre. CAPJET cannot damage the crossed cable as the trenching method used is high pressure, focussed, water jetting. If requested by the 3rd party asset owner, further cable protection such as cast-iron shells, Uraduct, plastic shells or silicon sleeves can be installed from the installation vessel.

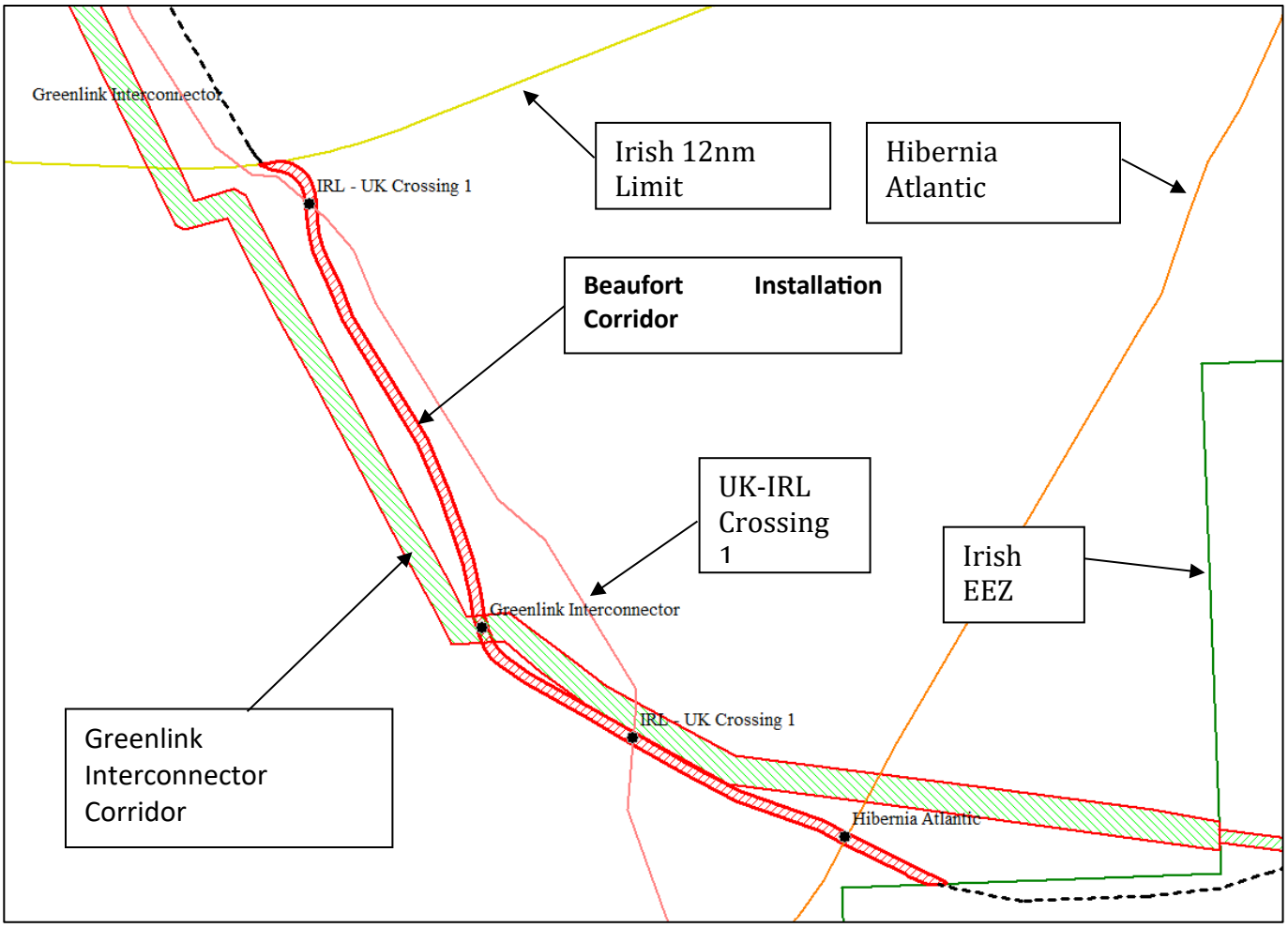


Figure 22: Subsea Crossings in Vicinity of Beaufort Route

5.7.2 Greenlink HVDC Interconnector Cable

The Greenlink Interconnector is a submarine power cable running from Baginbun Beach, Co. Wexford (east side of the Hook peninsula) to Freshwater West, Pembrokeshire, Wales. It was installed in 2025, and its overall route is similar to that of Beaufort (shown in *Figure 22*). The Beaufort cable route will cross the Greenlink Interconnector at: *51°45'20.6984"N, 6°29'02.1085"W*.

The preliminary crossing design for the Greenlink Interconnector intends to use the same Uraduct crossing cable protection and design as used in in-service telecoms cable crossings. Should this not be agreeable with the Greenlink Interconnector owners, alternative forms of crossing protection will be explored. This may involve pre-lay crossing construction. This may involve the installation of an articulated concrete mattress over the crossing point of the interconnector cable (as shown in *Figure 23*) prior to the main lay cable installation. The interconnector cable is buried at the crossing location. The dimensions of a concrete mattress are 3.0m x 6.0m x 0.45m and the leading edge of each mattress is tapered for hydraulic stability and for cable installation. The

Beaufort cable will then be laid over the concrete mattress. The exact crossing design will be confirmed following further consultation with the owners of the Greenlink Interconnector.

Figure 23: Example of Articulated Concrete Mattress

A summary of the pre-lay crossing construction works is as follows:

- It will be required to install additional protection on the Beaufort cable at the Greenlink crossing. This protection would likely consist of a product such as Uraduct, which is specialized polyurethane ducting designed to wrap around the cable thus minimizing abrasion.
- The concrete mattress required for the interconnector crossing will be loaded onto the Offshore Construction Vessel at the port of mobilisation.
- A pre-installation inspection will be undertaken at the crossing location including confirmation of crossing positioning and burial depth.
- The concrete mattress will be installed on the seabed using the vessel crane and a mattress installation frame with touchdown monitoring.
- The installation location will also be verified via beacons mounted on the installation frame. The mattress installation frame slings will be released, and the frame recovered to the deck.

A marine notice will be issued by the Fisheries Liaison Officer once the concrete mattresses have been installed to notify marine users. A Guard vessel will be positioned at the crossing location from the time of laying the cable until the completion of post-lay rock placement. Fishermen will be informed of the works, and the crossing locations and regular contact will be maintained with fishing fleets during this time.

5.7.3 Post-Lay Greenlink HVDC Interconnector Crossing Operations

If required, the Greenlink HVDC Interconnector crossing will be inspected following main lay installation and necessary post lay burial activities within the Safety Zone will be undertaken). It is expected that, the Post-Lay Inspection and Burial will be undertaken using the Nexans CAPJET burial tool.

In summary, the Post-Lay Inspection and Burial (PLIB) works are as follows:

- The PLIB vessel will take position at the crossing location.
- The crossing will be inspected by ROV.
- The Nexans CAPJET will be docked on the Beaufort cable at the limit of the Jet Zone, and moving away from the HVDC cable will bury the temporarily surface laid section of the Beaufort cable at a target trenching speed of 400m/hr.

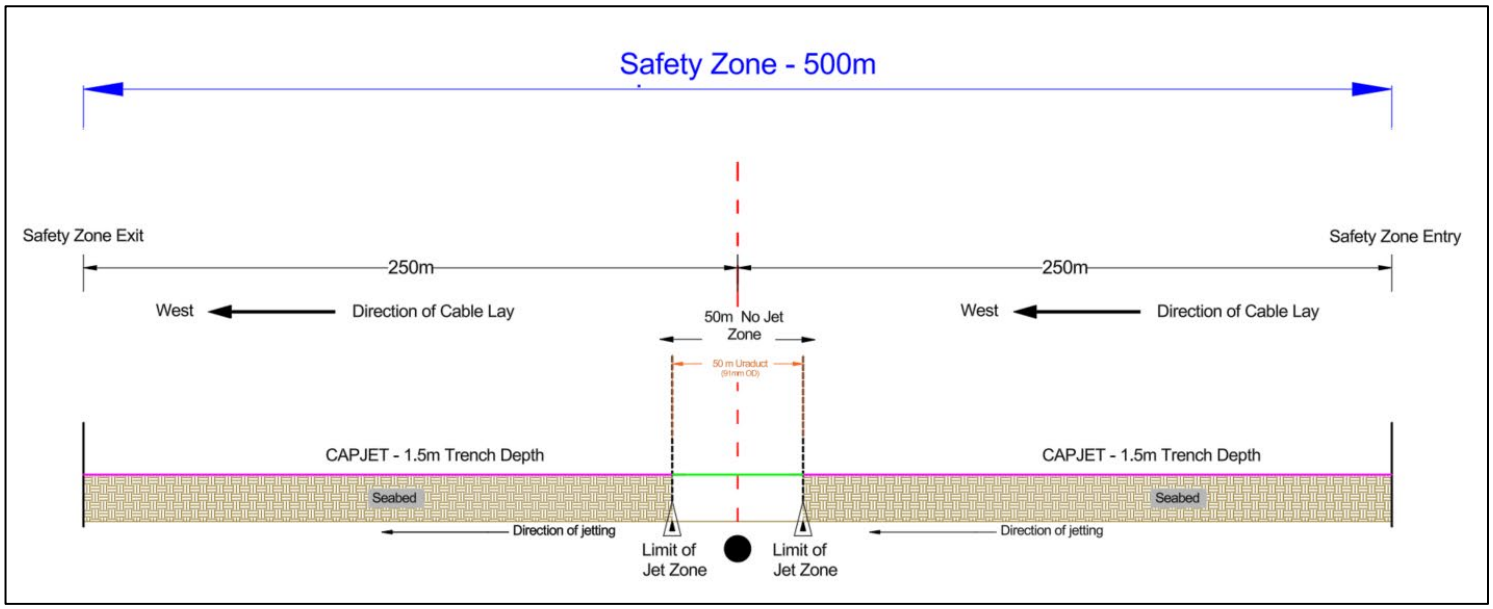


Figure 24: Greenlink HVDC Interconnector Crossing Safety Zone

Consultation with the owners of the Greenlink Crossing is currently ongoing.

5.7.4 Post-Lay Greenlink Interconnector Crossing Rock Berm Construction

Should the previously presented Post-Lay proposal not be agreeable with the Greenlink Interconnector owners, additional post-lay construction of a rock berm to protect the Beaufort cable may be required at the Greenlink HVDC Interconnector crossing.

The rock berm will extend 13.5m along the interconnector axis, centred at the crossing location, and a berm depth of 0.8m. This will cover the pre-lay concrete mattress. The rock berm along the cable axis will be 64m (total length) x 1.5m (top width).

The side slopes will be installed to a 1:3 ratio to provide hydraulic stability and protection from snagging of fishing gear etc. The area of the rock berm is 463m^2 (including sloped sides) with a total volume of rock of approximately 220m^3, accounting for a 10% loss in loose rock placement or discrepancies in the seabed geometry. The rock berm will be constructed with a mix of freshly

crushed rock (granite/gneiss) with a maximum size of between 12 and 20 cm topped with a 20cm layer of smaller armourstone.

The height of the proposed rock berm will not interfere with navigation, and the crossing and rock placement is designed to be trawled over by fishing vessels.

A summary of the rock placement works is as follows:

- The rock material will be loaded and positioned on the vessel in accordance with its grading and characteristics.
- The vessel will be loaded with the rock.
- The vessel will transit to the crossing location.
- The vessel will take position over the crossing point and hold position using its Dynamic Positioning (DP) systems.
- Rock placement will be undertaken in a controlled manner with the position of the fall pipe 'nozzle' above the seabed adjusted in real time to ensure accurate construction of the rock berm (*Figure 25*).
- The crossing will be surveyed by the observation ROV and, if successfully completed, the fall pipe will be recovered.

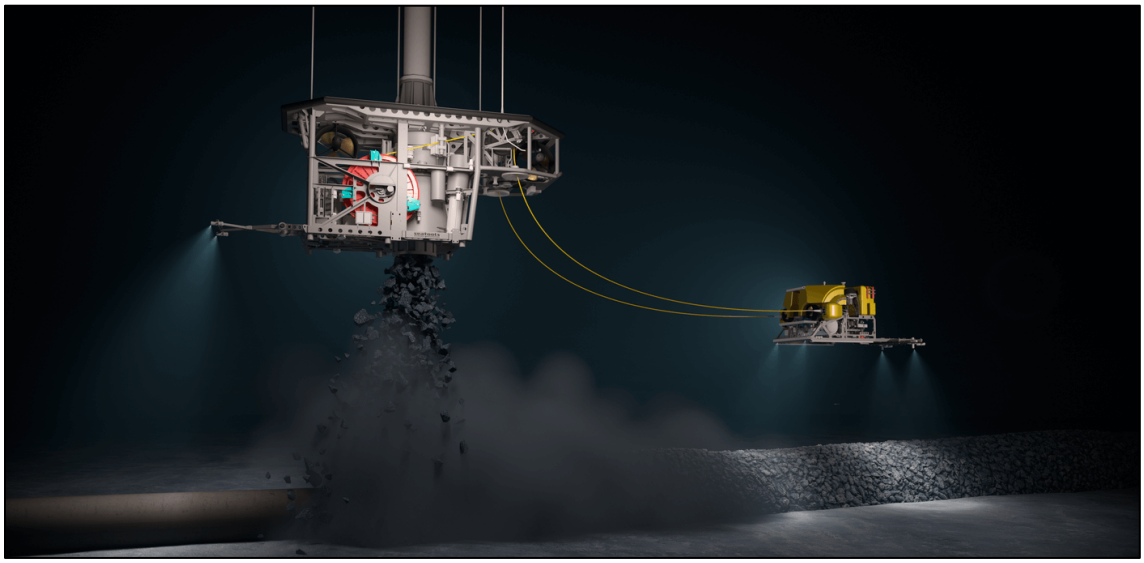


Figure 25: Fall Pipe Discharging Rock

The Beaufort installation corridor does not cross and will not interact with any of the following:

- Existing offshore renewable energy sites, i.e. wind farms
- Pipelines
- Oil and gas production facilities or licence blocks
- Restricted maritime areas
- Designated anchorage areas
- Marine outfalls

5.8 Marine Pollution Prevention

The cable installation will be conducted in accordance with all relevant national and international Health and Safety Legislation and Regulations, such as the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005) and Safety, Health and Welfare at Work (General Application) Regulations 2007 (S.I. No. 299 of 2007), as amended and in adherence to all major international shipping conventions, adopted by the International Maritime Organization (and the International Labour Organization) concerning maritime safety and pollution prevention, including the International Convention for the Prevention of Marine Pollution from Ships (MARPOL). With the implementation of these measures, the risk of pollution/contamination incidents will be reduced to an insignificant level.

5.9 Offshore Waste Management

A very small amount of non-hazardous refuse will be produced on board the cable lay vessel resulting from the normal day-to-day operations such as kitchen waste, consumables etc. No waste material will be dumped into the sea. All refuse waste shall be stored on board the vessel and safely disposed of onshore in accordance with the MARPOL Convention.

5.10 Climate

The operation of the cable installation vessel will result in the emission of exhaust gases associated with fossil fuel use. The transport of people, equipment and materials will also result in emissions of exhaust gases. Given the nature of the installation operations which will be conducted over a short timeframe, the quantity of emissions will be small and effects contributing to climate change will not arise. There will be no significant impact due to the planned cable installation works.

5.11 People and Human Health

The proposed offshore installation of the subsea telecommunications cable is located at a substantial distance from the coastline and from any permanent human receptors (29 km). The works will be confined to the offshore marine environment and will not give rise to emissions, discharges, or activities that could result in direct or indirect exposure of the public. In the absence of an identified exposure pathway, no effects on human health are anticipated as a result of the proposed works.

The proposed subsea telecommunications cable constitutes a passive, unenergized fibre-optic system and does not transmit electrical power. As such, the cable will not generate electromagnetic fields during operation. No EMF-related effects on human health are therefore anticipated.

The cable installation will be conducted in accordance with all relevant national and international Health and Safety Legislation and Regulations, such as the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005) and Safety, Health and Welfare at Work (General Application) Regulations 2007 (S.I. No. 299 of 2007), as amended and in adherence to all major international shipping conventions, adopted by the International Maritime Organization (and the International Labour Organization) concerning maritime safety and pollution prevention. With the implementation of these, there will be no impact nor any significant effects on people and human health during the installation.

5.12 Land & Soils

The Celtic Sea seabed off the coast of south-east Ireland, is underlain by Palaeozoic and Mesozoic bedrock that is covered by younger sediments. These bedrock units include ancient sandstones, siltstones and other sedimentary rocks from the Devonian and Carboniferous periods, with underlying formations such as limestone and sandstone deposited hundreds of millions of years ago. Offshore, this solid bedrock is buried beneath a thick layer of Tertiary and Quaternary sediments (sands, clays, gravels) that were deposited during and after ice ages, creating a mostly flat seabed surface. As shown in *Figure 26*, the entire offshore section of the Beaufort route between the Irish 12 nautical mile limit and the Irish EEZ traverses sandy seabed.

The seabed is regularly disturbed by natural processes. The cumulative volume of sediment displaced during the cable installation is small. Any sediment disturbed or suspended by the sampling will settle almost immediately. The cable installation is of short duration, with reinstatement of any areas of seabed impacted by cable installation completed naturally by tidal movements and currents. There will be no significant impact nor any significant effects on land and soils within the cable installation corridor.

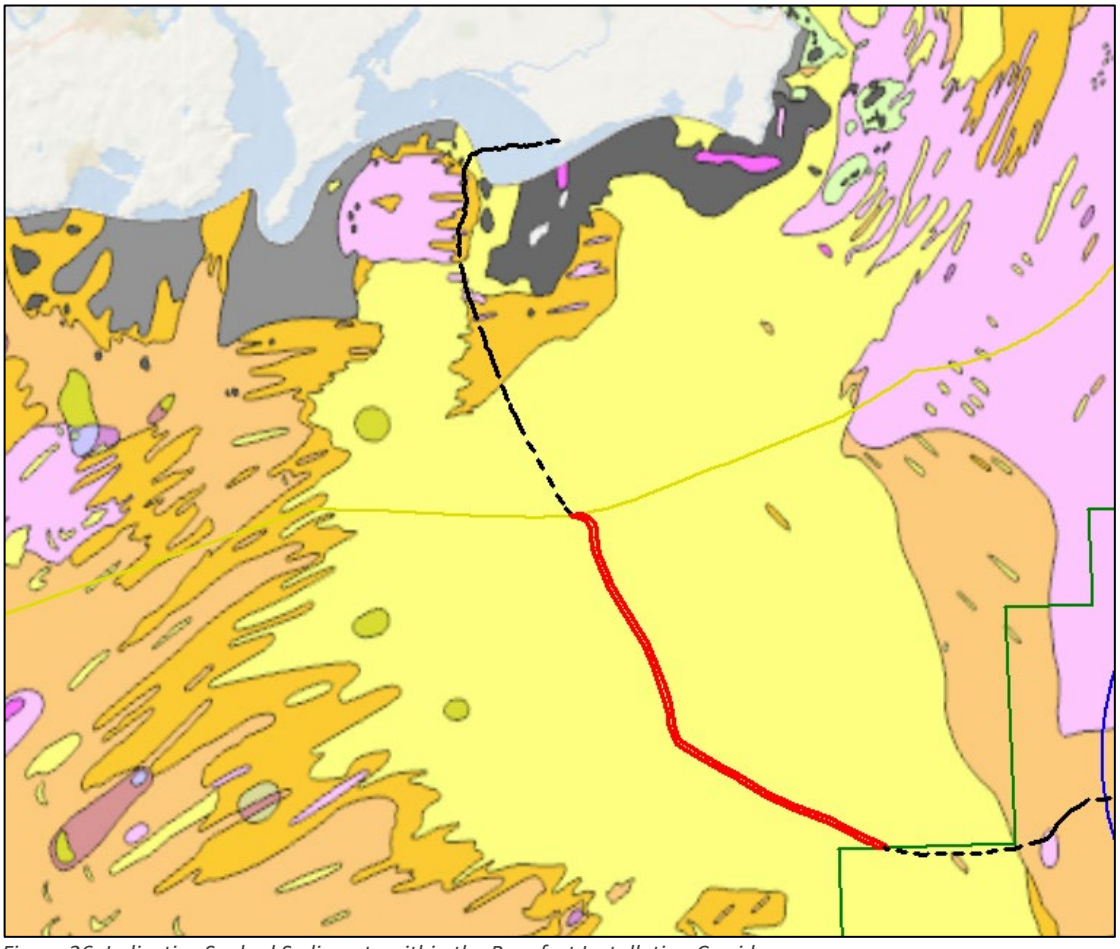


Figure 26: Indicative Seabed Sediments within the Beaufort Installation Corridor

5.13 Air Quality

During the cable installation, there will be no releases of emissions to air, other than routine vessel exhausts. Air Quality standards will not be exceeded.

5.14 Noise & Vibration

Shipping and general vessel traffic is a major contributor to background noise in oceans and seas. Vessels generally produce low frequency continuous sound. The cable installation vessel will contribute to background ocean noise. As seen in *Figure 18-21*, there is existing vessel traffic (shipping, fishing, recreation) transiting the cable installation corridor which generates anthropogenic sound and therefore the operation of the cable lay vessel in the area will not create significant additional noise or disturbance. Marine mammals are often seen near human activity and exhibit some tolerance to anthropogenic noise and other stimuli and range over a wide area when foraging.

Noise generated during installation of the subsea telecommunications cable will be associated primarily with the operation of the installation vessel and ancillary equipment. These activities are expected to generate relatively low noise levels compared to other offshore activities and will be short-term and localised in nature. Given the offshore location of the works and the absence of nearby human receptors, no significant noise effects are anticipated.

The risk of disrupting the life cycle of marine mammals is extremely low. The cable installation operations could cause temporary displacement from the immediate area and if it occurs, it will only occur during short periods. Any effect is likely to be quite localized and of relatively short duration. The potential for impact was considered within the Applicant's NIS assessment and Risk Assessment for Annex IV Species.

The cable installation operations shall comply with the NPWS (2014) "Guidance to manage the risk to marine mammals from man-made sound sources in Irish waters". These guidelines would be deemed adequate to mitigate the negative impacts of the works. Cetaceans in the vicinity of the vessel during start up procedures would be given ample time to leave the site with the soft start procedures outlined in the guidelines. In addition, vessel speeds are extremely slow which would give marine mammals ample opportunity to move from the area. With the implementation of mitigation measures, there is no significant risk for potential impact on cetacean and any possible disturbance from the works would be contained within the very limited local disturbance from the presence of the cable installation vessel.

5.15 Recreational Boating

The proposed subsea telecommunications cable installation corridor is located offshore, with the closest point situated approximately 29 km from the mainland of County Wexford. Recreational activities such as coastal walking, sailing, angling, surfing, and other nearshore water-based uses are therefore spatially removed from the proposed works. Installation activities will be short-term and localised, and no permanent surface infrastructure will be introduced. Given the offshore location, distance from recreational receptors, and temporary nature of the works, no significant effects on recreational activities are anticipated.

Recreational boating and sailing activity is primarily concentrated in nearshore and coastal waters (as shown in *Figure 27*), the installation corridor lies outside areas typically used by recreational craft. Installation activities will be temporary and managed in accordance with standard maritime safety procedures, including appropriate notifications to mariners.

During the marine installation operations, the cable installation vessel will display lights, shapes and internationally recognised identification or warning signals. Other vessels and marine users will be requested to maintain a safe distance from the cable lay vessel due to their restricted manoeuvrability.

Mitigation measures will be in place to ensure compliance with the International Regulations for Preventing Collisions at Sea and standards, including the issuing of a formal marine notice. As the cable installation will be temporary and of limited duration, the effect on recreation activities is expected to be minor.

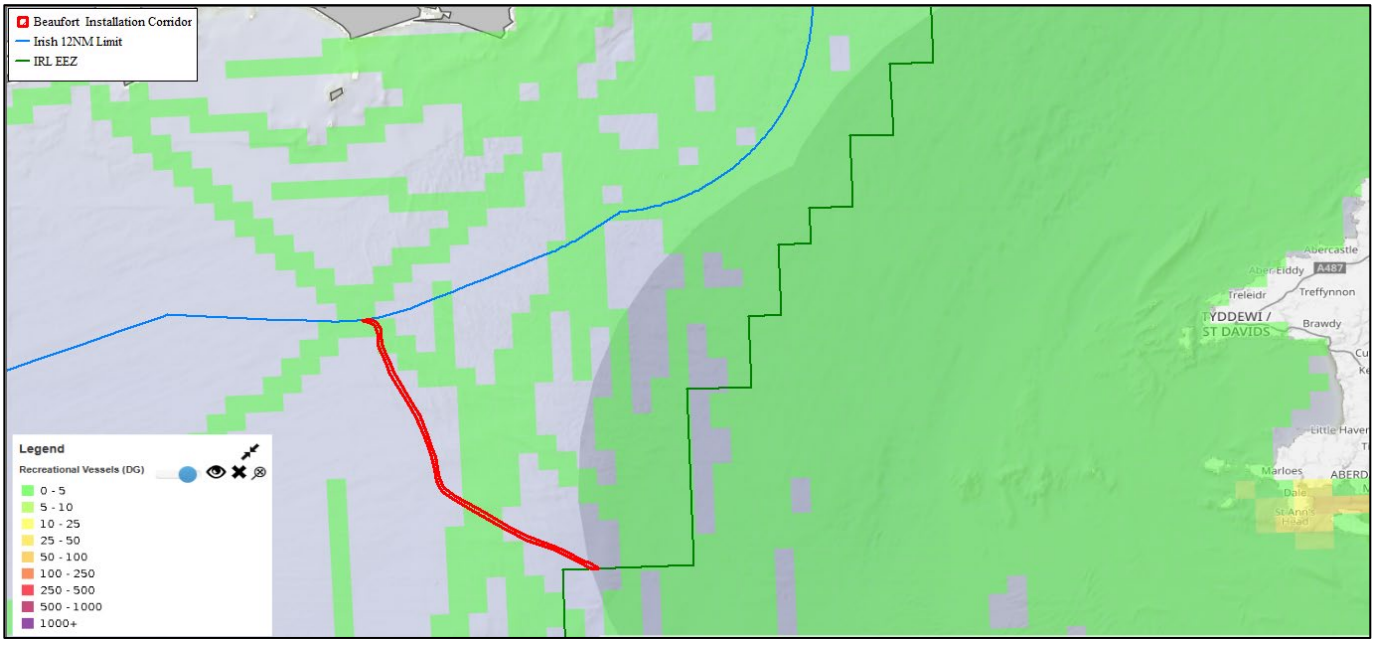


Figure 27: Pleasure Craft Vessel Activity in the Vicinity of the Beaufort Installation Corridor

5.16 Accidents & Disasters

Given the nature of the installation operations which will be small scale, temporary and conducted over a short timeframe, they will not influence natural disasters, such as earthquakes, subsidence, landslides, erosion, or flooding. Coastal fog or adverse stormy weather and related sea states can occur in the installation corridor and wider coastal/offshore marine zones.

The potential for a major accident to arise because of the installation operations is low and will be further minimised through mitigation measures. With relevance to safety of shipping and navigation, mitigation will include publication of a formal Marine Notice, display of lights, shapes and other internationally recognised identification or warning signals on the cable lay vessel and compliance with all requirements of the International Regulations for Preventing Collisions at Sea.

5.17 Interactions with Other Maritime Developments

Marine Area Consents (MACs), Marine Usage Licences (MULs), Foreshore Applications, the Irish EIA portal and the Wales Marine Planning Portal were examined, and the potential for in-combination effects or interactions due to development in the area assessed.

In terms of investigating potential interactions between the installation of Beaufort and maritime activities on the Irish side of the EEZ boundary, a review of the Maritime Regulatory Authority's (MARA) online portal for MAC and MUL applications and determinations was undertaken for developments in County Wexford and County Waterford. For applications prior to July 2023, the foundation date of MARA, the DHLGH Foreshore Licence Applications and Determinations search tool (Department of Housing, Local Government and Heritage (DHLGH), was used to search for foreshore licence applications for developments in County Wexford and County Waterford. The NMPF Activities Map was also consulted for relevant licence applications. This is considered a conservative approach, considering the very temporary and localised nature of the cable installation operations detailed in this application.

In terms of investigating potential interactions between the installation of Beaufort and maritime activities on the Welsh side of the EEZ boundary, a review of the Wales Marine Planning Portal and Natural Resources Wales public register of permits was undertaken.

As the identified inshore element of the Beaufort Cable project (**FS007361**) is likely to result in very similar underwater noise/disturbance effects, the implementation of the proposed subtidal mitigation measures outlined within the NIS prepared for **FS007361** will act to eliminate any potential for in-combination effects on the qualifying interests and SCIs of European Sites within the Zone of Interest of the project. These measures will be in place for the entire cable lay.

Reference	Title	Year	Location	Activity	Status	Potential for Interaction
FS007361	Beaufort Subsea Fibreoptic Cable	2022	Off Wexford Coast	Installation of subsea fibreoptic cable between Kilmore Quay, Co. Wexford and Irish 12nm Limit	Determined	There is a potential for in-combination effects in terms via noise and visual disturbance to marine mammals and protected seabirds. The implementation of the mitigation measures outlined in the supporting environmental documentation will be required to prevent in-combination effects.
MAC240016	Laying of a Fibre Optic Cable and auxiliary works	2025	Duncannon, Co. Wexford and Crooke, Co. Waterford	Telecoms Cable Installation	Applied	No installation corridor overlap and very low probability for any interaction.
MAC240057	Offshore Windfarm Development – Helvick Head Offshore Wind	2025	Tonn Nua, off County Waterford	The development of a 900 megawatt (MW) offshore windfarm	Applied	No installation corridor overlap and very low probability for any interaction.
MAC20240006	Beach Restoration	2025	Courtown, Co. Wexford	The restoration of the north beach and construction of beach retaining coastal defence structures and the installation of a new marina and necessary supporting structures	Applied	No installation corridor overlap and very low probability for any interaction. .
MAC20230005	ORE Operation and Maintenance Facility Development	2024	Rosslare Europort, Co. Wexford	ORE Operation and Maintenance facility, which includes reclamation of approximately 20 hectares for assembly/storage, relocation of small boat harbour, capital dredging, quay walls, road access and rock armour boundary.	Determined	No installation corridor overlap and very low probability for any interaction.

Table 12: Marine Licences in the Vicinity of the Installation Corridor (1/2)

Reference	Title	Year	Location	Activity	Status	Potential for Interaction
MUL250019	Site Investigation – Helvick Head Offshore Wind	2025	Tonn Nua, off County Waterford	The proposed site investigation (SI) works are activities required to characterise the physical, biological, and environmental conditions of Maritime Area A - Tonn Nua. The data collected will underpin project design, environmental assessment, and consenting, for any future offshore wind development within Maritime Area A – Tonn Nua	Applied	No installation corridor overlap and very low probability for any interaction.
MUL240026	Study of Water Currents and Bathymetry along the Southeast Coast	2024	Wexford, Waterford	To conduct a strategic modelling study of water currents and bathymetry along the Southeast Coast of Ireland	Applied	No installation corridor overlap and very low probability for any interaction.
MUL240036	Marine Site Investigations for two offshore substations	2024	Cork, Wexford, Waterford	The maritime usage proposed is for marine site investigation (SI) works to inform the engineering design and environmental assessments for two offshore substations (OSS) in the Tonn Nua Area A (as identified in the South Coast Designated Maritime Area Plan), potential offshore transmission cable corridors, approaches to seven potential landfall	Determined	The main component site investigations have been completed as of 21/10/2025 (detailed in Marine Notice No. 41 of 2025), therefore no interaction with the Beaufort installation is likely. As part of these site investigations, two Metocean Buoys will be fixed in place until July 2026. They are well outside of the Beaufort installation corridor and will likely not be present during the cable lay in 2027.

				zones, and seven landfall zones.		
FS007621	Péarla Offshore Wind Limited - Site Investigations For Export Cable Corridor For A Proposed Offshore Wind Project	2023	Off County Waterford	Site Investigations for ORE Export Cable	Applied	Currently this application has not been approved, it is likely that the Beaufort cable installation will be completed before these site investigations take place. The Designated Maritime Area Plan (DMAP) approved in 2024 supersedes this project as it introduced a new framework on how offshore renewable energy projects can proceed. This new regulatory framework will likely mean this application will need to be resubmitted to MARA and the site investigations will likely not occur prior to the Beaufort installation.
LIC240006	Geophysical survey for future ORE development	2024	Off the coasts of counties Wexford, Waterford and Cork	Deployment of the Marine Institute's R.V. to undertake a geophysical survey in the South Coast DMAP to inform future offshore renewable energy development.	Determined	No interaction possible - The site investigations have been completed as of 31/10/2025 (detailed in Marine Notice No. 05 of 2025).
FS007318	East Celtic Offshore Wind Park Site Investigations	2021	Off Counties Waterford and Wexford	RWE Renewables Ireland East Celtic Limited wishes to investigate the feasibility of developing an offshore wind farm and is applying for a licence to undertake site investigation activities on a site called East Celtic Offshore Wind Park in the east Celtic Sea. The site is located within the 12 nautical mile limit.	Applied	Currently this application has not been approved, it is likely that the Beaufort cable installation will be completed before these site investigations take place. The Designated Maritime Area Plan (DMAP) approved in 2024 supersedes this project as it introduced a new framework on how offshore renewable energy projects can proceed. This new regulatory framework will likely mean this application will need to be resubmitted to

						MARA and the site investigations will likely not occur prior to the Beaufort installation.
FS007445	Blackwater OWL Windfarm Ltd. – Marine Surveys	2022	Off County Wexford	Blackwater OWL Windfarm Limited is seeking to undertake a variety of marine surveys at the proposed site in order to inform the specific location, design and layout of the proposed offshore wind farm and export cable route to shore. The surveys will include geophysical, geotechnical, environmental and metocean campaigns and are detailed in this foreshore licence application form and supporting documents. Specifically, the objective of the proposed Foreshore Licence Application works is to determine detailed site conditions including seafloor geology, metocean conditions and environmental characteristics.	Applied	Currently this application has not been approved, it is likely that the Beaufort cable installation will be completed before these site investigations take place. The Designated Maritime Area Plan (DMAP) approved in 2024 supersedes this project as it introduced a new framework on how offshore renewable energy projects can proceed. This new regulatory framework will likely mean this application will need to be resubmitted to MARA and the site investigations will likely not occur prior to the Beaufort installation.

Table 13: Marine Licences in the Vicinity of the Installation Corridor (2/2)

6. CONTACT DETAILS

Contact details relevant to the implementation of this CEMP are provided below. A list of emergency contact details is presented in *Table 6*. Contact details for Beaufort Project Personnel will be provided following confirmation of key roles, prior to the start of construction.

Contact	Telephone
Irish Coastguard	+353 1 678 3454
UK Coastguard	+44 1326 317575
Kilmore Quay Harbourmaster	+353 53 912 9955
Harbour Master - Rosslare	+353 (0)53 915 7921
Emergency Services	999/112
Local Garda Station Kilmore Quay	+353 (0)53 9129 642
Wexford Hospital	+353 (0)53 9153 313
Environmental Protection Agency (EPA)	+353 (01) 268 0100
Inland Fisheries Ireland	+353 (0)526 180 055
NPWS (District Conservation Officer)	+353 (01) 539 3460
Wexford County Council	+353 (0) 539 196 000

Table 14: Emergency Contact Details

COMMON ABBREVIATIONS

AA	Appropriate Assessment
AIMU	Assessment of Impact of the Maritime Usage
AIS	Automatic Identification System
BIM	Bord Iascaigh Mhara
CO	Conservation Objective
DAFM	Department of Agriculture, Food and the Marine
DAHG	Department of Culture, Heritage and the Gaeltacht
DHLGH	Department of Housing, Local Government and Heritage
EC	European Commission
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EPA	Environment Protection Agency
EPS	European Protected Species
EU	European Union
FLO	Fisheries Liaison Officer
HABs	Harmful Algal Blooms
ICES	International Council for the Exploration of the Sea
IMO	International Maritime Organization
ISO	International Organization for Standardization
ITM	Irish Transverse Mercator
JNCC	Joint Nature Conservation Committee
LSE	Likely Significant Effects
MAP	Marine Area Planning Bill
MARPOL	The International Convention for the Prevention of Pollution from Ships
MI	Marine Institute
MMO	Marine Mammal Observer
NIS	Natura Impact Statement
NM	Nautical Mile
NPWS	National Parks and Wildlife Service
NSER	Non-Statutory Environmental Report
NtM	Notice to Mariners
SCI	Special Conservation Interest
SISAA	Supporting Information for Screening for Appropriate Assessment
SPL	Sound Pressure Level
SSS	Side Scan Sonar
SWD	Shellfish Waters Directive
TTS	Temporary Threshold Shift
UTM	Universal Transverse Mercator
VMS	Vessel Electronic Monitoring System
WGS	World Geodetic System

Table 15: Common Abbreviations

REFERENCES

Carter, L., Burnett, D., Drew, S., Hagadorn, L., Bartlett-McNeil, D., Irvine, N. and Talling, P. (2009) *Submarine cables and the oceans: Connecting the world*. Cambridge: UNEP World Conservation Monitoring Centre / International Cable Protection Committee. Available at: https://www.researchgate.net/publication/286143047_Submarine_cables_and_the_oceans_Connecting_the_world (Accessed: 6 March 2026).

Carter, M.I.D., Boehme, L., Cronin, M.A., Duck, C.D., Grecian, W.J., Hastie, G.D., Jessopp, M., Matthiopoulos, J., McConnell, B.J., Miller, D.L., Morris, C.D., Moss, S.E.W., Thompson, D., Thompson, P.M. and Russell, D.J.F. (2022) *'Sympatric seals, satellite tracking and protected areas: Habitat-based distribution estimates for conservation and management',* Frontiers in Marine Science, 9.

Davies, P., Britton, R.J., Nunn, A.D., Dodd, J.R., Crundwell, C., Velterop, R., Ó'Maoiléidigh, N., O'Neill, R., Sheehan, E.V., Stamp, T. and Bolland, J.D. (2020) *'Novel insights into the marine phase and river fidelity of anadromous twaite shad Alosa fallax in the UK and Ireland',* Aquatic Conservation: Marine and Freshwater Ecosystems, 30(7), pp. 1291–1306

Department of Communications, Marine and Natural Resources (2005) *Marine Notice No. 15 of 2005: Guidelines for Correct Procedures When Encountering Whales and Dolphins in Irish Coastal Waters.* Available at: https://s3-eu-west-1.amazonaws.com/wwhandbook/guideline-documents/Ireland_Marine-Notice-No-15-of-2005_Guidelines-for-correct-procedures-when-encountring-whales-and-dolphins.pdf (Accessed: 12 February 2026).

Department of the Environment, Climate and Communications (2024) *South Coast Designated Maritime Area Plan for Offshore Renewable Energy*. Dublin: Government of Ireland. Available at: https://assets.gov.ie/static/documents/south-coast-designated-maritime-area-plan-for-offshore-renewable-energy-october-2024.pdf (Accessed: 23/01/2026).

Department of the Environment, Heritage and Local Government (2001) *Planning and Development Regulations, 2001 (S.I. No. 600 of 2001)*. Dublin: Government of Ireland. Available at: https://www.irishstatutebook.ie/eli/2001/si/600/made/en/print (Accessed: 23/01/2026).

Drew, S.C. and Hopper, A.G. (2009) *Fishing and Submarine Cables: Working Together*. 2nd edn. International Cable Protection Committee (ICPC). Available at: https://cil.nus.edu.sg/wp-content/uploads/2009/10/ICPC-Fishing-Booklet-090223.pdf (Accessed: 6 March 2026).

EirGrid and RTE (2021) *Volume 5: Joint Environmental Report – Celtic Interconnector*. May 2021. Available at: https://www.eirgridcelticinterconnector.ie/planning-and-environmental-documents/Volume-5_Joint-Environmental-Report_Celtic-Interconnector_May-2021.pdf (Accessed: 22/01/2026).

European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) (2011) *European Communities (Birds and Natural Habitats) Regulations 2011*. Irish Statute Book. Available at: https://www.irishstatutebook.ie/eli/2011/si/477/made/en/pdf (Accessed: 12 February 2026)

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European Parliament and Council (2011) *Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment*. Official Journal of the European Union L 26, 28 January 2012, pp. 1–21. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0092 (Accessed: 23/01/2026).

European Union (2008) *Directive 2008/56/EC of the European Parliament and of the Council establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)*. Available at: https://eur-lex.europa.eu/eli/dir/2008/56/oj (Accessed: 22/01/2026).

International Maritime Organization (IMO) (1972) *Convention on the International Regulations for Preventing Collisions at Sea (COLREGs)*. Available at: https://www.imo.org/en/OurWork/Safety/Pages/Preventing-Collisions.aspx (Accessed: 22/01/2026).

International Maritime Organization (IMO) (1973) *International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)*. Available at:

https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-%28MARPOL%29.aspx (Accessed: 22/01/2026).

International Maritime Organization (IMO) (2004) *International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM)*. Available at: https://www.imo.org/en/about/conventions/pages/international-convention-for-the-control-and-management-of-ships'-ballast-water-and-sediments-(bwm).aspx (Accessed: 23/01/2026)

Ireland (2005) *Safety, Health and Welfare at Work Act 2005* (No. 10 of 2005). Available at: https://www.irishstatutebook.ie/eli/2005/act/10/enacted/en/print.html (Accessed: 22/01/2026).

Ireland (2007) *Safety, Health and Welfare at Work (General Application) Regulations 2007* (S.I. No. 299 of 2007). Available at: https://www.irishstatutebook.ie/eli/2007/si/299/ (Accessed: 22/01/2026).

Ireland – Department of Climate, Energy and the Environment (n.d.) *Foreshore Notices*. Available at: https://www.gov.ie/en/foreshore-notices/ (Accessed: 22/01/2026).

Ireland – Department of Climate, Energy and the Environment (2021) *National Marine Planning Framework*. Available at: https://www.gov.ie/en/publication/a4a9a-national-marine-planning-framework/ (Accessed: 22/01/2026).

Irish Whale and Dolphin Group (IWDG) (2019) *Cetacean Welfare Policy*. Available at: https://iwdg.ie/cms_files/wp-content/uploads/2019/12/IWDG-Cetacean-Welfare-Policy-doc-for-Web-1.pdf (Accessed: 12 February 2026)

Jenkins, S.R., Lart, W., Vause, B.J. and Brand, A.R. (2003) 'Seasonal swimming behaviour in the queen scallop (*Aequipecten opercularis*) and its effect on dredge fisheries', *Journal of Experimental Marine Biology and Ecology*, **287**(1), pp. 25–42.

Joint Nature Conservation Committee (JNCC) (2023) *JNCC Report No. 734*. Available at: https://data.jncc.gov.uk/data/b48b8332-349f-4358-b080-b4506384f4f7/jncc-report-734.pdf (Accessed: 12 March 2026).

Marine Institute (n.d.) *Ireland's Marine Atlas*. Available at: https://atlas.marine.ie (Accessed: 9 March 2026).

Marine Institute (n.d.) *MarinePlan.ie – Activities Map*. Available at: https://marineplan.ie/?page=Activities-Map#data_s=id%3AdataSource_41-17c18df634f-layer-152-17b2b2f15c5-layer-47%3A36108 (Accessed: 22/01/2026).

Merchant Shipping (Investigation of Marine Casualties) Act 2000 (No. 14 of 2000) (2000) *Merchant Shipping (Investigation of Marine Casualties) Act 2000*. Irish Statute Book. Available at: https://www.irishstatutebook.ie/eli/2000/act/14/enacted/en/html (Accessed: 6 March 2026).

Natural Resources Wales (n.d.) *Public Register*. Available at: https://www.naturalresources.wales/publicregister?lang=en (Accessed: 22/01/2026).

National Parks and Wildlife Service (NPWS) (2014) *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters*. Available at: https://www.npws.ie/sites/default/files/general/Underwater%20sound%20guidance_Jan%202014.pdf (Accessed: 22/01/2026).

Reid, N., Hayden, B., Lundy, M.G., Pietravalle, S., McDonald, R.A. and Montgomery, W.I. (2013) *National Otter Survey of Ireland 2010/12*. Irish Wildlife Manuals No. 76. Dublin: National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Rikardsen, A.H., Righton, D., Strøm, J.F. et al. (2021) 'Redefining the oceanic distribution of Atlantic salmon', *Scientific Reports*, 11, 12266.

Seafish (2023) *Basic Fishing Methods: A comprehensive guide to commercial fishing methods*. Seafish (Sea Fish Industry Authority)

Seafood/ORE Working Group (2023) *Seafood/ORE Engagement in Ireland: A Summary Guide*. Department of Climate, Energy and the Environment, Government of Ireland. Available at: **https://assets.gov.ie/static/documents/seafoodore-engagement-in-ireland-a-summary-guide.pdf** (Accessed: 12 February 2026).

Submarine Telegraph Act 1885 (48 & 49 Vict., c. 49) (1885) *Submarine Telegraph Act 1885*. Irish Statute Book. Available at: https://www.irishstatutebook.ie/eli/1885/act/49/enacted/en/print.html (Accessed: 6 March 2026).

The Maritime Regulator (n.d.) *Our Work – Maritime Area Consents: Applications & Determinations*. Available at: https://www.maritimeregulator.ie/our-work/maritime-areaconsents/applicationsdeterminations/?_gl=1*kfuqh8*_up*MQ..*_ga*MTg0MzY5NjczOS4xNzY5MDc5NjM2*_ga_4BE8YJL1CF*czE3NjkwNzk2MzUkbzEkZzEkdDE3NjkwNzk2NDAkajU1JGwwJGgw (Accessed: 22/01/2026).

Welsh Government (2025) *Wales Marine Planning Portal*. Available at: http://lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8&tgt=false&layers=231,390 (Accessed: 22/01/2026).

Yordanova, T. and Milliken, K. (2017) *UK Sea Fish Industry Map – United Kingdom*. Seafish (Sea Fish Industry Authority). Available at: https://www.seafish.org/document/?id=34896 (Accessed: 6 March 2026).